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GOVERNMENT OF TAMILNADU
TRUTH ALONE TRIUMPHS

12,826

PROPOSED
WORKING PLAN
FOR
THE TIRUPATHUR FOREST DIVISION

1st April 1978 to 31st March 1988

Part I to III

By
Thiru T. K. RAJAGOPALAN, I. F. S.
Deputy Conservator of Forests.

Under the Direction of
The Chief Conservator of Forests, Madras-6.

OFFICE OF THE FOREST WORKING PLAN OFFICER,
SALEM-636 007

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Part I

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PREFACE

The Tirupathur forest division as it exists today comprises of Alangayam, Tirupathur, Chengam, Sathanur and Tiuvannamalai territorial ranges, Sandalwood Depot range, Farm Forestry range, Special duty range Tiruvannamalai and Drought Prone Afforestation range, Tiruvannamalai lying in Tirupathur, Chengam, Vaniyambadi and Tiruvannamalai taluks of North Arcot district. Tiruvannamalai range of Cuddalore division was added on to this Division and Harur range of Vellore West division was transferred to Dharmapuri division in 1968 at the time or re-organaisation of the division. Hence, the working plans prepared by Thiru G. J. Rajasingh I.F.S., for Vellore West division and by Thiru K. R. Venkatesan I.F.S., for Cuddalore division so far as it relates to Tiruvannamalai range were taken up for revision from 1—10—75 with head quarters at Salem. The reconnaissance report for Tirupathur division was discussed at Sathanur Dam on 30-8-1976.

The writer is deeply indebted to Thiruvalargal T. Jeyadev I.F.S. Chief Conservator of Forests (Development) and K. A. Bhoja Shetty I.F.S. Chief Conservator of Forests (General) for their abiding interest shown in the preparation of this plan and their valuable guidance for clearly fixing the scope and objectives of this plan.

Thiruvalargal S.A. Rahmatullah I.F.S., and A.M. Mahmood Hussain I.F.S., was Conservators of Forests Working Plan and Research directed the preparation of this plan and the writer is greatly indebted to them for their able and useful suggestions and instructions given during the preparation of this Plan. The writer is also thankful to Thiru. A. M. Tholamani Devar I.F.S., Conservator of Forests, Salem Circle for his valuable guidance and suggestions in the revision of the Plan.

The help and co-operation of the District Forest Officers of Tirupathur Division, Extension Forestry Division Vellore and Crash Plantation Division, Vellore and their staff is also acknowledged with gratitude.

The writer also wishes to acknowledge the services of Thiruvalargal N. Paramasivam, K. Palanisamy, K. Kandasamy, Working Plan Range Officers and K. Manickam, V. Harinathan, S. Sheik Hussain, S. Syed Rahman, A. B. Srinivasan, N. R. Selvarajan, K. Subramaniam M. Loganathan and P. C. Kannan, Working plan Foresters in helping the collection of statistics, drawing of maps and other field works.

Salem,
1—8—77

T. K. RAJAGOPALAN,
Forest Working plan Officer.

WORKING PLAN FOR TIRUPATHUR DIVISION

PART I.

SUMMARY OF THE FACTS ON WHICH THE PROPOSALS ARE BASED.

CHAPTER I.

THE TRACT DEALT WITH.

SECTION 1—NAME AND SITUATION.

1. This Working Plan deals with the whole of Tirupathur Division as constituted as per G.O. Ms. No. 2954, Agriculture, dated 7th October 1968 with the following modifications:—

(1) Thiruvannamalai Range of Cuddalore Division was added on to this Division with effect from 1st November 1968.

(2) Harur Range which formed part of this Division earlier, was transferred to Dharmapuri Division at the time of its formation with effect from 8th November 1968. This Plan is a revision of the Plan of Thiru K. R. Venkatesan, I.F.S., for Cuddalore North Division and the Plan of Thiru G. J. Rajasingh, I.F.S., for Vellore West Division so far as it relates to Thiruvannamalai Range of erstwhile Cuddalore Division and Alangayam, Tirupathur, Chengam and Sathanur Ranges of Vellore West Division. Though the Plan is primarily concerned with the Reserved Forests and Reserved lands of the Division, its provisions will also apply to a limited extent to other classes of lands for purposes of exploitation of certain items of Forest Produce especially sandalwood and the management of Farm Forestry Plantations, subject to the provisions of the Tamil Nadu Panchayat Act XXV of 1958 and subsequent orders of the Government thereon.

2. *Situation.*—The tract covered by the Division lies between North latitudes 11°59' and 12°45' and East longitudes 78°10' and 79°20'. It occupies southern part of the North Arot district bounded on the north by Vellore Division, on the east by Suddalore Division, on the south by Cudddalore and Salem Divisions and on the west by Dharmapuri Division. For a short length it also touches Andhra State boundary.

SECTION 2—CONFIGURATION OF THE GROUND.

3. The terrain over which the forests lie exhibit a range of altitude and configuration but they are never so significant as to bring about a change in the composition and condition of vegetation to any significant extent. The tract can be broadly grouped under two categories, viz., (1) the Plains and (2) the Hlls..

4. *The Plains.*—Plains are the outer ranges of the Mysore plateau which extent along Bangalore-Jolarpet Broad Guage line: Most of the ex-panchayat Forests of Chengam and Tiruvannamalai taluks fall under this category. Ponniar Reserved Forests of Sathanur Range forms the biggest of Plain forests. The general elevation is is arount 350 M. There are few scattered low hillocks of which Thruvannamalai hillock is about 817 M., being the highest and most prominent.

5. *The Hills.*—The hill portion can be grouped into two main blocks, via., (1) The Javadi Hills and (2) The Yelagiri Hills.

6. *The Javadi Hills.*—These hills rise steeply from the plains forming an undulating plateau on the top of about 800 M. elevation. These are the principal mountain Ranges of the ivision running in the south-west to north-east direction and cover about 570 sq. K.M. in Tirupathur, Alangaym and Chengam Range and continue in Vellore Division. Within the Division the hills run to a length of about 52 k.m. and width about 25 k.m. enclosing small valleys. The outer slopes are rocky, steep and precepitous. The centre and south of the Range extends to the neighbouring Vellore Division consisting of extensive plateau on the top portion interspread with occasional peaks. The average elevation of the Range is about 760 M. The highest point is Kambugudimalai (3,826) 1166 M. on the common boundary between Alangayam and Tirupathur Ranges and this served as "RADAR" station during the Second World War. Melpet on the Tenmalai hills with an altitude of 1045 M. (3,430 feet) forms another important land mark. Tenmalai is the local name for the part of Javadi Hills in Chengam Range.

7. *The Yelagiri Hills.*—The hill forms a compact block, of about 72 sq. K.M. situated on the eastern side of Tirupathur-Vaniyambadi Road. It has an appearance of an extinct Volcano with steep rocky sides with a circular base and a plateau on top colonised by the Malayalis and the people from the plains. Except on the north and north-east portion, most of the outer slopes are barren interspread with big boulders. In the upper reaches, the vegetation tends to be evergreen. Of late, the Athanavur village situsited on the pleatau is gaining importance as a hill resort and attracting people from the plains in large numbers. The average elevation is (3,200 feet) 975 M. with the highest point, incidentally the highest point of the Division on Swamimalai with a height of (4,392 feet) 1,339 M. named after the temple it has on top abutting the northern and north-western boundaries is situated the Ponneri itta forests which has been denuded to a grassy slope with huge bouldery outsrops, due to indiscriminate cutting and grazing.

8. *Drainage.*—The general direction of drainage is mostly to the north. The western portion of the hill is drained by numerous small streams which empty themselves into the Pambar River. A small portin on the north is drained by Uttarai Kaveriar, a small river which takes a northerly course and joins the Palar River. In Yelagiris, drainage is effected by several small streams on all sides which merge into several tanks situated around.

9. *River system.*—Cheyyar which forms one of the main tributaries of Palar, drains most of the Javadis. It runs southwards and at Chengam takes a wide curve and then takes a north-easterly course and finally joins the Palar. Ponniar forms the other important river. Starting from the Chennakesava Hills of Mysore State, the rive runs in west to east direction and finally falls into the sea near Cuddalore. Sathanur Dam is constructed across this river near Sathanur.

10. None of the rivers in this Division can be called perennial. Every Cheyyar and Ponniar can be called only semi perennial since the rivers are dry for most part of the year. The other streams are small and dry except for few days during the rains.

SECTIZN 3—GEZLGY, ROCK AND SOIL.

11. The underlying rocks for most part are granite or geneissic in composition. Masses of cutcrops of granite of good quality are often seen. The chief components of the rock are hornlblende and felspar. Mica and granite are extremely rare. Foliation can seldom be seen. Quartz is often noticed in the plains.

12. Talc is found in Royandapuram 'A' Block.. Years back a quarry was worked for making fancy articles, though not of high quality.

13. *Soil.*—The siol type most commonly met with is shallow reddish loam of varying depth and fertility. Such red soils are derived basically from the decomposition and weathern of underlying rocks which are more or less ferruginous, especially the horn-blendic varieties. There is a deficiency of lime in the sandal bearing soils as observed by the Indian Institute of Science. The soil vary from a hard stony type on the hill sides where disintegrated quartz predominate to fertile red clayey loan on the plateau part of the hils and in the valleys. In the former case no forest growth exists while in thelatter, the depth of soil is capable of suporting a reasonably good tree growth. In Kavalur, Melpet and Nellivasal on the plateau soil is red loam or gravelly loam which is often greyish brown on surface due to admixture of humus. In the valleys near Paramanandal, Chennasamudram and Mudanai Reserved Forests, the soil tends to be clayey and Kankarous. The high iron content is always apparent. In the most of the reserved forests of Tiruvannamalai and Sathanur Ranges, the surface soil has been completely eroded leaving only the hardened sub-soil devoid of any fertility due to excessive grazing in these parts. Aluminium is rar an dis met within narrow fringes along the banks of bigger rivers like Cheyyar and Pennajar.

14. The soil commonly met with in the forests of this Division can be broadly grouped as followgs:—

1. Red soil.
2. Lateritic soil.
3. Black soil.
4. Sandy soil.
5. Kallar soil.
6. Skeletal soil.

15. The soil of the tract dealth with, difler even at few metres and it is rare to have a block of 100 ha. to have only one type of soil.

SECTIZN 4—CLIMATE.

16. *Temperature.*—There is a distinct variation in the climate between the Javadis and the claims in the Division. The climate is distinctly cooler and more pleasant towards the western side which becomes progressively warmer towards the eastern side. During March to May it is very hot and dry with occosional gusty storms in the afternoons but it generally cools down after the few showers that usually fall in the month of May. The average maximum temperature in shade is 32° C and the average minimum is 19° C. The climatological data for Tirupathur is given in Appendix I.

17. The climate of Javadis and Yelagiris is always milder and more pleasant and the daily range of temperature is greater than what is records in the plains. Frost is unknown but during cold season a substantial dew fall greatly benefit the vegetation. Tiruvannamalai taluk which lies on the south-eastern corner of the Division is exceedingly hot in summer. Sathanur and Chengam also experiences such severe summer, while Tirupathur which is on the western side enjoy a less severe summer. The temperature curve in page opposite shows the mean maximum and mean minimum for Tirupathur town.

18. *Winds.*—The western half of the Division enjoys good breeze during the period of the south-west monsoon while the eastern half experience strong gales whipping up dust and sand. Occasional hail strom occur during April or May.

19. *Rainfall.*—There is a considerable variation in the raifall from place to place and from year to year. The Division gets an average annual rainfall of 850 mm. to 900 mm. derived from both the monsoons. Generally in the Javadis both the monsoons are active and there is a good distribution of rainfall throughout the year.

20. The statement showing the aveage monthly and annual rainfall for the various stations all over the Division for the years 1961–1975 with additional information as to the average number of rainy days occuring each month for each of the stations are furnished in Appendix 2 (a) and ((b) Charts showing the average rainfall received and the occurrence of number of rainy days during the various months of the year for Chengam and Kommutteri are furnished herewith.

21. The accurance of the rainfall figures recorded in the interior of the Forests, where it is recorded by non-resident forest guard or forests, has to be regarded with caution. However, correct picture of the rainfall can be had only from the non-forest rainguage stations.

22. It is considered that months receiving an average rainfall of less than 55 mm. is dry. If the rainfall is between 50 mm. to 100 mm. , the months s coinsidered moist when it exceeds 100 mm. , the month can be viewed as wet. Accordingly the dry months are from January to April. The wet months are from August to November. May, June, July and December can be considered as moist mois months.

SECTION 5—WATER SUPPLY.

23. The main source of water supply in the plains is from wells mostly through seasonal supply got from the rivers like Cheyyar, Pambar, etc. The water table is generally low, water being struck about 20 mm depath. Thanks to the Welfare Department, few wells are dug to meet the water supply of the villages. Many of them, particularly in the hills are not hygenically maintained. The same state of affair prevails to the pools in the hills. which serve as a source of water supply, whenever weekly are not used.

24. Water supply to Forest Rest houses aud subordinates quarters is from wells maintained by the Department. A statment showing the source of water supply to departmental buildings is furnished in the Appendix III with the details regarding the construction of the wells, and their condition.

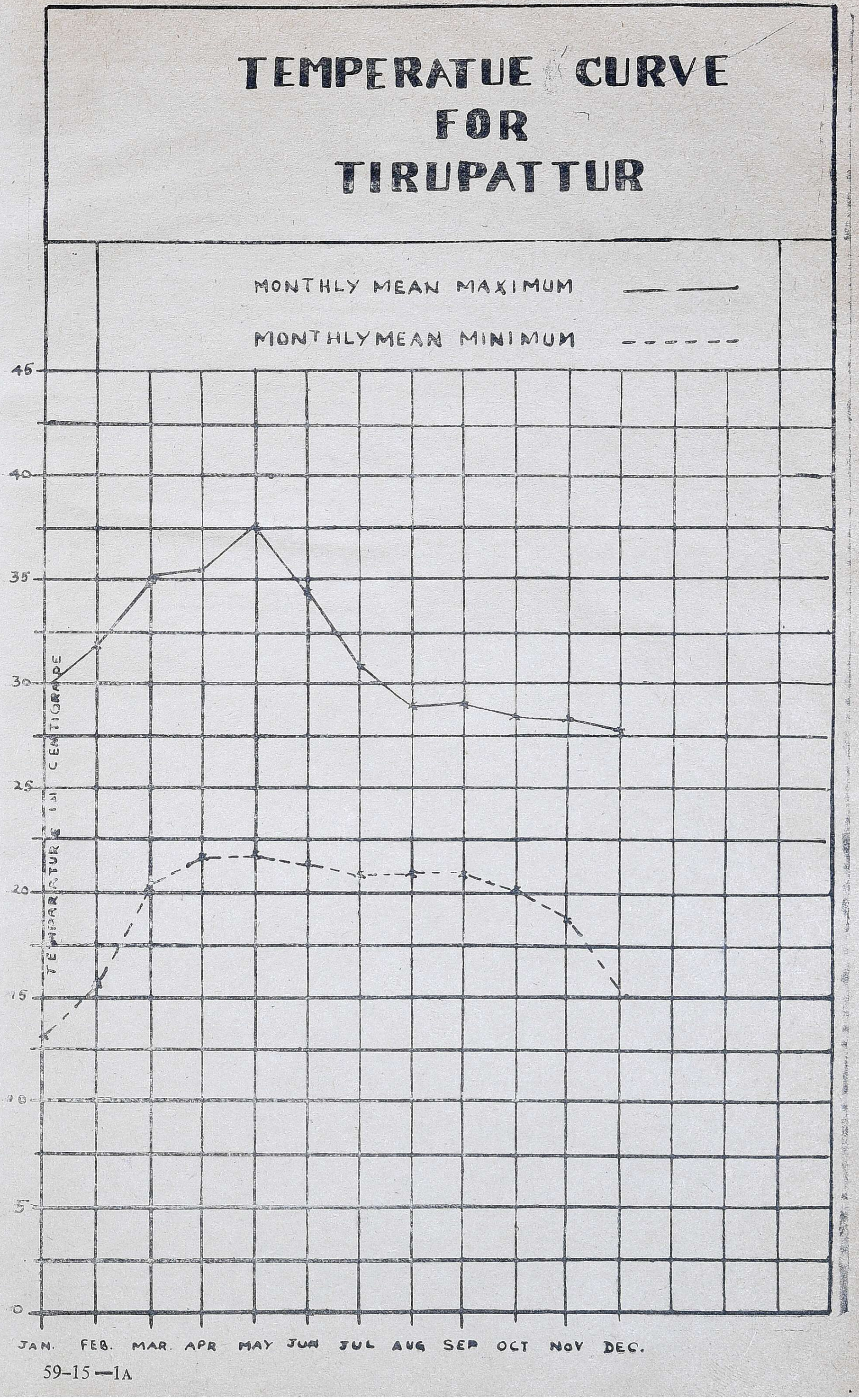
25. A list of wells and tanks dug, maintained or repaired by the department for the benefit of the villagers and their cattle is given in appendix IV.

26. Some of the Rest hoses built inside the reserved forests or on the hills, still lave no wells. Some rest houses come to disuse for want of nearby w·tir snpply. For example ,Pudur Forest house has no well and not at all made use of. Nellivasal Rest House has also no well and water has to be brought from t2e nearby village. Thanipadi Rest House tough has a well, during summer, gets dried up and requires deepening. The bore well fitted with pumpset at Kavalnr Rest House compound, frequenty runs short of water supplo and ii would be wisc to qig a well instead, to serve as a source of water supply to the staff stationed there

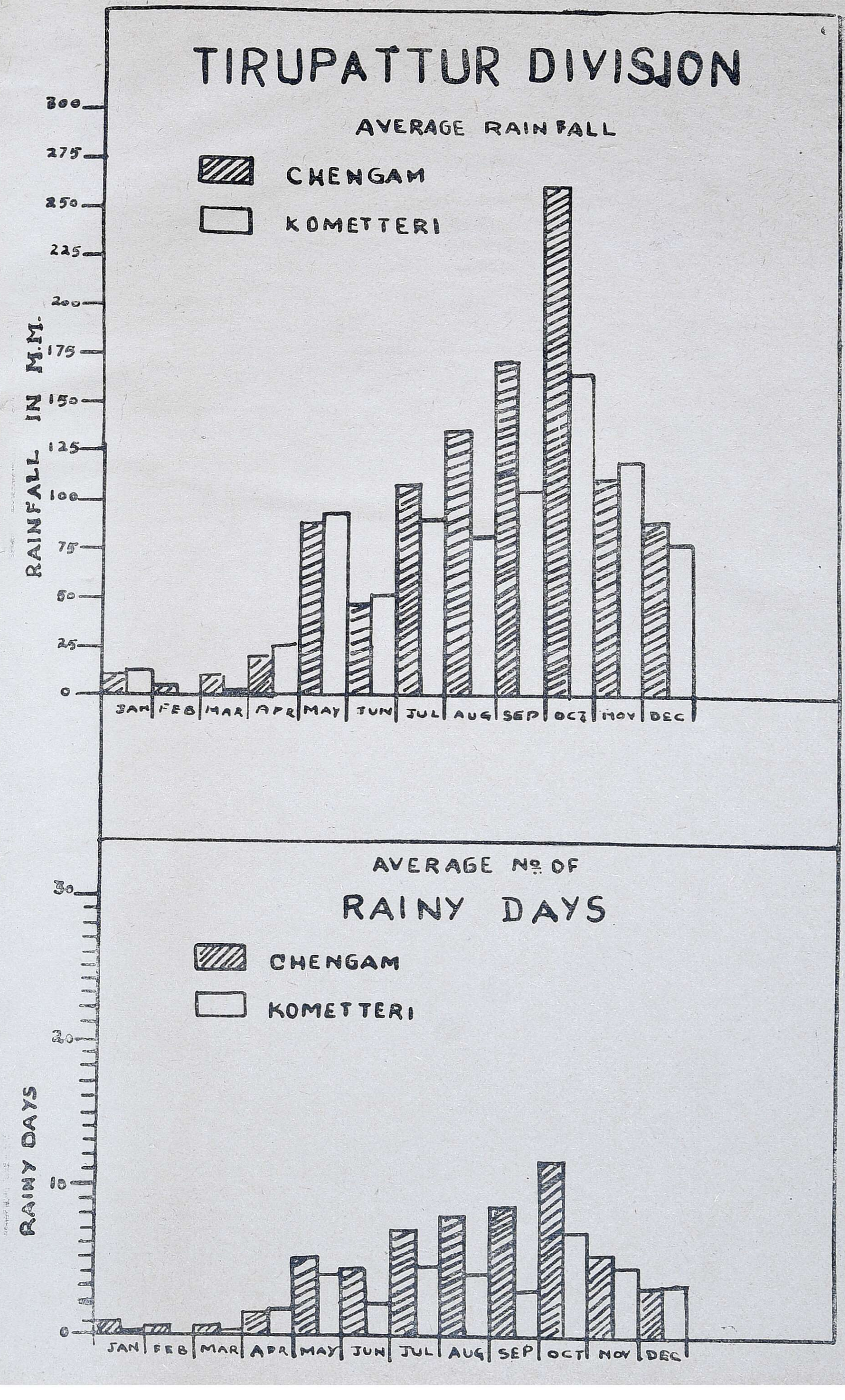
SECTION [6—Distribution and area

27. The Forests in the Division consists of reserved Forests and Reserved ladds. The total area of the Division falls under north Arcot District, within the taluks as noted below.

Nane of Taluk	Sq. K. M.
(1) Vaniyambadl taluk (part)	567–95
(2) Tsirupathur Taluk	870–61
(3) Chengam Taluk	1,688–.51
(4? Tiruvannamalai Taluk	970–19
Total landed area ..	4,097–28



TEMPERATUE CURVE FOR TIRUPATTUR


TIRUPATTUR DIVISION
AVERAGE RAINFALL
▨ CHENGAM
☐ KOMETTERI
RAINFALL IN M.M.
300
275
250
225
200
175
150
125
100
75
50
25
0
JAN
FEB
MAR
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MAY
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JUL
AUG
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AVERAGE No. OF
RAINY DAYS
▨ CHENGAM
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RAINY DAYS
30
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JAN
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28 The extent and Category of Forests

nge. (1)	Class I Forests in ha. (2)	Class III Forests in ha. (3)	Reserved lands in ha. (4)	Total area in each Range in ha. (5)
(1) Thruvannamalai Range	....	12715·05	....	12715·05
(2) Sathanur Range	28408·93	7561·71	....	35970·64
(3) Dhengam Range	26496·65	4198·17	....	30694·82
(4) Tirupathur Range	22872·12	....	....	22872·12
(5) A langayam Range	20843·20	490·08	731·27	22064·55
Total Extent ..	98620·90	24965·01	731·27	124317·18

Detailed List of Reserved Forests and Reserved Lands in each Range of The Division is furnished in Appendix V. A.

29. The statement of sections and beats with head-quarters of the beat for the different Ranges of the Division is given below.

Name of Range, Section and beats. (1)	Beat head-quarters. (2)	Staff. (3)
I TIRUVANNAMALAI RANGE		
Tiruvannamalai Section		
1. Sorakolathur beat	Kariandal	One guard and one watcher.
2. Kannamadai beat	Kattupundi	Do.
Tippakadu *section*		
3. Kilanathur beat	Velanendal	Do.
Pachal *section*		
4. Pachal beat	pachal	Do.
5. Adaiyur beat	Periyakulam	Do.
II SATHANUR RANGE		
Sathanur Dam Section		
6 Sathanur beat	Sathanur Dam	One guard and one watcher.
7 Veppur beat	Sathanur Dam	Do.
8 Thandrampet beat	Thandrampet	Do.
Sorapanandal Section		
9 Sorapanandal beat	Ariyakunjur	Do.
10 Pinjur beat	Pinjur	Do.
Arattavadi Section		
11 Thalaiyuthu beat	Porasapattu	Do.
12 Puliyampatti	Puliyampatti	Do.
Thanipadi Section		
13 Reddiyapalayam beat	Reddiapalayam	Do.
14 Athipadi beat	Athipadi	Do.
15 Beemarapatti beat	Beemarapatti	Do.
Perungulathur Section		
16 Thanipadi beat	Thanipadi	Do.
17 Royandapuram beat	Pondai	Do.
18 Perungulathur beat	Navakollai	Do.
Radhapuram Section		
19 Radhapuram beat	Radhapuram	Do.
20 Pnomalai beat	Gudalur	Do.

III CHENGAM RANGE

Pudupalayam Section		
21 Damarai Kadu beat	Pudupalayam	Do.
22 Mudanai beat	Pudupalayam	Do.
Ravandavady Section		
23 Ravandavady beat	Ravandavady	Do.
24 Anandavady beat	Dhandrampet	Do.
Cheyyar Section		
25 Muthanur beat	Muthanur	One Guard and one watcher
26 Oorgoundanur beat	Kuppanatham	Do.
27 Cheyyar beat	Paramanandal	Do.
Kuttathur Series Section		
28 Kuttathur series	Kuttathur	One guard and Bungalow watcher.
Melpet Series Section		
29 Nellivoy series	Melpet	One Guard and watcher.

TIRUPATHUR RANGE

Matrapalli Section		
30 Mambakkam beat	Anganathavalasai	One Guard and watcher.
31 Mottur beat	Bommikuppam	Do.
Andiappanur Section		
32 Andiappanur beat	Andiappanur	Do.
33 Rajapalayam beat	Rajapalayam	Do.
Singarapet Section		
34 Singarapet beat	Singarapet	Do.
35 Govindapuram beat	Govindapuram	Do.
36 Kuppanatham beat	Thandrampattu	Do.
Paramanandal Section		
37 Thagarakuppam beat	Kuppanatham	Do.
38 Chennasamudram beat	Chennasamudram	Do.
39 Nadukuppam beat	Paramanandal	Do.

V. ALANGAYAM RANGE

40 Nayakkanur beat	Kavalur	One guard and one watcher
41 Pungulam beat	Pungulam	Do.
Alangayam Section		
42 Alangayam beat	Alangayam	Do.
43 Badakuppam beat	Alangayam	Do.
44 Vellakuttai beat	Vellakuttai	Do.
Athanavur Section		
45 Madakadappa beat	Madakadappa	Do.
46 Jolarpet beat	Athanavur	Do.
47 Mangalam beat	Mittoor	Do.
Kottur Section		
8 Nagaluthu beat	Kottur	Do.
Mittoor Section		
49 Narasingapuram beat	Mittoor	One guard only.

SECTION 7 : BOUNDARIES.

30. The boundaries of the reserved forests are demarcated by cleared lines 5.5 metres (18') wide along which are set rough stone cairns, at prominent bends and intermediate points, so that two consecutive cairns are visible from each other. But often the effective width of the cleared lines is much less and do not appear to have been cleared at all for a long time. Very often the cairns are found as heaps of loosely packed stones and they do not bear stone slabs inscribed as 'R.F'. The inter reserved forest boundaries are overgrown with growth and require re-clearing in many cases. The ex-panchayat reserved forests, have pillars, with or without stone around them.

31. A phased programme to rectify neglect of the past in keeping the boundaries cleared, may be undertaken and particularly this work may be started at all vulnerable points of the boundary where chances of encroachment are there.

SECTION 8—LEGAL POSITION.

32. All the Reserved Forests of this Division are the absolute property of the State Government subject anly to rights and concessions granted at the time of settlement. Their control vests entirely with the Forest Department. All the Reserved the lands notified under section 4 of the Tamil Nadu Forest Act V of 1882 should also be deemed to be the property of the Government without lock

judice to the rights of others pending determination in the course of settlement. Their control also vests fully with the Forest Department. Lands outside the Reserved Forest under the control of the Forest Department is furnished in Appendix V-D.

Unreserved.—Unreserved lands falling in this Division in Javadis extend over an area of 10,976 hectares comprising of Palamarathur (Chengam Range) Kambagudi and Puliyur unreserves (Tirupathur Range) Kambagudi and Land Revenue Administration in hill villages of Javadis in Tirupathur Range was controlled by the Forest Department. But in pursuance of G.O. Ms. No. 2406, Food and Agriculture, dated 21st April 1964 the Land Revenue Administration was transferred to the Revenue Department. Consequently the protection of the unreserves became a problem, as large scale clearance and ruthless destruction of the forests by the Malayalis for unauthorised cultivation, started taking place. Considerable damage was caused to the standing sandalwood trees and Forest Department was in a helpless position to do anything as the Forest Officials were not empowered to book offences under the Forest Act in the nureserved by virtue of the powers invested with panchayat under section 72 (i) of the Tamil Nadu Panchayat Act of 1958. The proposal to notify these unreserved forests as reserved forest was also stalled for want of concurrence from the concerned panchayats who had the administrative control over these areas. To get over this difficulty the Tamil Nadu Panchayat Act of 1958 was amended in 1971 and under section 72-A of the amendment (Second Amendment and Validation Bill of 1970) the Government was vested with the powers to resume the possession and administration of the unreserves and upon such resumption by the Government all rights and interests created in or over such unreserved forests before such resumption shall as against the Government cases and determine. Consequently to this amendment the proposal to reserve these unreserves under section 16 of the Tamil Nadu Forest Act of 1882 is already in progress. As a first step the unreserves of Palamarathur extension forests extending area 2238 hectares was declared to be reserved land under section 26 of the Tamil Nadu Forest Act of 1882, from 30th June 1976 as per notification issued in the *North Arcot District Gazette*, dated 5th August 1976 at page No. 51. Similarly the unreserved land of Kambagudi forests evxtending over 3,920 hectares was declared to be reserved lands as per notification issued in *North Arcot District Gazette*, dated 5th September 1976 at page 60. Regarding Puliyur unreserves extending over an area 4,809.45 hectares notification under section 26 of the Tamil Nadu Forest Act is pending with the Collector of North Arcot district.

33. According to G.O. Ms. No. 158, Local Administration Department, dated 4th February 1960 the trees and usufructs in the unreserves came under the control of the Panchayats: But in G.O. Ms. No. 1550, Rural Development and Local Administration, dated 30th May 1961 the ownership of the sandal in all public lands existing or which may grow subsequent to the above Government Order lies with the Government and Panchayat have not right over such trees. Accordingly the extraction of Sandalwood in the unreserves and public lands is continued to be done by the Forest Department as in the past.

34. As the unauthorised cultivation by clearing valuable unreserves on the hills was on the increase, proposal to declare hill stations of Pudur Nadu, Pungampattu Nadu and Nellivasal Nadu under the Madras Hill Station (Preservation of Trees) Act, 1955 (Madras Act XVIII of 1955) was made in Tirupathur District Forest Officer's No. 6045/63 B. Accordingly in G.O. Ms. No. 1671, Agriculture Department, dated 30th May 1969, the above three hill stations in the Javadi hills of Tirupathur Range were notified under sub-section (2) of section 1 of the Madras Hill Stations (Preservation of Trees) Act of 1955 (Madras Act XVII of 1955). To enforce the Madras effectively proposals were submitted to delegate the powers under rule 9 of the above Act to the Forest Officers, in District Forest Officer's No. 6045/63, dated 18th July 1969 and orders on this are awaited. This has to be persued.

35. Consequent to Pataskar Award, Gollapalli tank 12-14 hectares (30 acres) and forests round Javadisamudram Tank 214.42 hectare (530 acres) were taken over from Andhra Pradesh on 1st April 1960. As there are isolated bits containing no forest growth, it was considered not worthwhile to keep them as Reserved Forest. Accordingly these areas were handed over to the Revenue Department in 1964 as per Government Memo. No. 107487/D II/I 63-3, Forests and Agriculture Department, dated 8th October 1963.

36. In G.O. No. 2357, Food and Agriculture, dated 30th June 1965, the Government ordered the release of 431.40 hectares (1,066 acres) in Ponniar Reserved Forests of Sathanur Range for the Public Works Department camp quarters, office, etc., of Sathanur Reservoir Project. Land value of Rs. 2,55,840 at Rs. 240 per acre was collected in August 1967 as per G.O. Ms. No. 106263/D II, Agriculture, dated 13th April 1967. The demarcation of the area handover is still pending.

37. An area of 102.80 hectares in Eraiyurmalai Reserved Forests of Tiruvannamalai Range was transferred and handed over to the Revenue Department on 31st July 1972 for assignment to the landless poor Harijans as per G.O. Ms. No. 1163, Agriculture, dated 19th April 1972, Notification under section 24 of Tamil Nadu Forest Act was approved in G.O. Ms. No. 267, Forest and Fisheries, and published at page 245, dated 12th May 1976 of *Tamil Nadu Government Gazette.*

38. In Melchengam and Anandavadi Reserved Forests an area of 3970.31 hectares was handed over to the Central State Seed Farm on 30 years lease as per G.O. Ms. No. 2788, Agriculture, dated 20th October 1971. Rent for lease of land will be Re. 1 per acre per annum. The revenue realised is as follows:—

		Area.	Revenue.
Anandavadi	RF	3346·46 ha	2,50,886
Melchengam	RF	624·04 ha	1,38,261/-

39. *Form Forestry Plantations.*—The Farm Forestry Plantations raised in this Division are located mostly in tank beds and other poramboke lands administered by the panchayats or the Public Works Department. These areas do not come under the unreserves dealt with under 26 of the Forest Act, with the result offences committed inside these areas have to be reported to the Police for being deals with under Indian Penal Code.

40. *Sandal on Patta Lands.*—Government have the rights of ownership over sandalwood trees found not only on land at the disposal of the Government but also on pata lands assigned on or after a notified date which varies to localities. In the earlier days, the Sandal growing on patta lands belonged to the pattadars and it was found difficult to protect the sandalwood growing in the Reserved Forest and unreserve from pilferage by private patta sandal merchants. On a representation by the Forest Department, the Government ordered that the sandal growing on patta lands assigned after a notified date as detailed below becomes the absolute property of the Government. The date of assignment and the Government order relating to the different localities are furnished below:—

(1) On the Javadis (excluding the Tenmalais) sandal growing on lands assigned after 10th June 1907 belongs to Government ordered in G.O. Ms. No. 1462, Revenue, dated 10th June 1907.

(2) Throughout the Tenmalais (Chengam Javadis) no pattas were issued prior to May 1911. Sandal growing on lands assigned belongs to Government over the entire Tenmalais as ordered in G.O. No. 1427, Revenue, dated 29th May 1911.

(3) On the Yelagiris sandal growing on lands assigned after 11th April 1918, belongs to Government as ordered in Board's proceedings Forests No. 134, Misc., dated 11th April 1918. Extracts from Boards proceedings and Government orders cited above are given in Appendix VI-A, B, C of this Working Plan.

41. *Land Revenue Administration on the Tirupathur Javadis.*—From the year 1917 to 1964 the Land Revenue administration in the hill villages of Tirupathur Range was controlled by the Forest Department. The main reason for the deviation from the customery system of control by the Revenue Department was to enlist the co-operation of the 'Malayalis' (local hill tribes) in the protection of Sandal bearing forest situated on the 'Javadi Hills'. The 32 hamlets grouped into three villages, known as 'Nads' (Pudur Nadu, Pungampattu Nadu and Nellivasal Nadu) were under the superintendence of village munsiffs and one or two menials for each. The village officers concerned unde rthe control of the Land Revenue Department in rank. The kist amounts collected by the village munsiffs were accounted for by the Forester (Land Revenue). The annual scruitiny of accounts and records, popularly known as 'Jamabandi' was conducted by the District Forest Officer, (distinguished as Deputy Collector) and once in three years, the District Collector conducted the 'Jamabandi'. Transfer of pattas, sub-division of land, etc., were done by the District Forest Officer.

42. The three villages comprising of the 32 hamlets are given below:—

Pungampattu Nad.

Chinnavattanur
Kallavoor
Perumpalli
Koothanur
Sherkanur
Kilanur
Belur
Kambagudi
Madur
Rangasamudram
Thagarakuppam
Palayapalayam
Kodagumalai
Vasanthapuram

Pudur Nad.

Pudur
Molalai
Chittoor
Arumalapattur
Melur
Kelur
Kombai
Nadukuppam
Valankuppam
Valuthalampet

Nellivasal Nad.

Nellivasal
Nellipattu
Sembarai
Melpet
Puliyur
Malaitirupathur
Malayandipatti

Andramalai

43. Consequent to the retransfer of the Revenue Administration to the Revenue Department, to certain extent, the grip over the Malayalis in recruiting labour for works had suffere. They have also diverted their attention much in clearing the forest growth in the unresernes for shifting cultivation leading only pockets of growth in more inaccessible areas. After repeated request by the Forest Department; the unreserves of Palamarathur Extension and Kambugudi, have been notified under Section 26 of the Tamil Nadu Forest Act of 1882 by the Collectofro Zorth Arcot. Similary the Ponneri Mitta Forest at the foot of the Yelegiris has been withdrawn from the contro of the concerned panchayats and declared under Section 26 of the Tami Nadu Forest Act of 1882 and notified in the Districf Gazette. Copies of these notifications are found in Appendicet VII A, VII B & VII C. Action to get the area surveyed and demarcated for these three unreserves is pending. Proposals to notify Puliyur unreserves under section 26 of the Tamil Nadu Forest Act of 1882 is still pending approval and notification by the Collector of North Arcot District.

Section 9—Rights and Concessions.

44. The rights and concessions allowed in the Reserveg Forests at the time of settlement are detailed in section 1d notifications relatingto each reserve. A register containing these notifications is maintainal at the District Forest Office Tirupatur. Most of these rights relate to the rights of way (to men & vehicles) rights to water course, access to enclosury tem les etc. Reference to the date of issue and the pages in which the notification were published are given in Appendix **V A**.

45. *Temprory leases :*—The following are the tempror leases given for cultivation by the District Forest Officer Tirupathur as per section 133 of the Forest Code and renewed annually at his discretion.

Chengam Range	*Sl. No.*	*Name of lease*	*Area of lease in H*
1. Nallaputtu RF	1	Perumal S/o Ramasamy Oudigurianvr, Paderi village.	37-3
2. Do.	2	Chinnapaiya Gounder. S/o Kaveri Counder. Paderf Village, Nachamalai	45-45 ha.
3. Do.	3	Gopal, S/o Paiya Gounderr. Nallaputtu of Pulichakuttai.	12-4
4. Do.	4	Anumal Gounder. S/o Ramasamy of Kotathur, Ondikurianur	19-9
Tirupathur Range			
Inner Javadi RF	5	R. Anumal Gounder. S/o Ramasamy Gounder Kootatur Village, Pongampattu Nadu	17-7 ha. Free lease for 1958-59 (DFO.'s D. Dis. 52 /62 D.

46. Under the section 21 of the Madras Forest ; Act following permits are issued and renwed, at an annual rent a noted.

Name of RF *and orders.*	*Area.*	*Purposes for which lease is granted.*	*period*	*Annual Rent*
1. Tenmalai RF (C.C.F. No. 17532/71 El dt. 23–10–71)	2 Ac.	Police radio repeater station.	Five years from 26–7–72	[Rs. 5.00 per annum
2. Sorakolathur RF (GO. No. 1151/SW dt. 20–9–71)	22 Ac.	For opening begger home.	10–4–71 to 24–12–76	Free
3. Nagaluthu RF and Mangalam RF (Jalakampar. i)	2 Ac.	Improvement to water falls and construction of temple	5–10–74 to 31–3–79	Rs. 5.03 per annum
4. Mambakkam RE (C.C.F. No. D. Dis. 57320/76 El dt. 21–4–77	Two bits of half Ac. each.	For temple	From 1977. (annual)	Rs. 10.00 per annum
5. Annamalai RF	3–84 ha.	Kattusiva Ashramam	Pemit to be renewed annually.	Rs. 10.00 per annum for entire area.
6. Kavathimalai RF	1334 sq. metre.	For temple purposes (Thiru. Kannan	Do.	Rs. 20.00 per annum
7. Annamalai RF	400 sq.m.	Kumari Arvetti (Ashram)	Do.	Rs. 10.00 per annum
8. DFO's Bungalow compound (C·C.F's No. 13032/70 E, dt. 21–7–70	1.25 ac.	Play ground for Dominic Sovio Middle school, Tirupathur	Do.	Ro. 12 per annum

47. *Astro-physical Observatory at Inner Javadis.*—As per G.O. Ms. No. 1759, Forest and Agriculture, dated 5th May 1965 and G.O. Ms. No. 3353, Agriculture, dated 14th November 1968 an area of 40 acres in the Inner Javadis of Tirupathur division was given on lease during 1965 to the Meteorological deparements for locating an Astro-physical observatory by collecting Rs. 5 per acre per annum for a period of 5 years. The lease period expired in 1970 and in Chief Conservator of Forests No. 17295/70 E-1, dated 16th September 1970, he recommended to the Government the renewal of the lease for a further period of 5 years but Government in their G.O. Ms. No. 3069, Agriculture, dated 21st November 1970 have stated that draft lease deed adopting the form approved, in G.O. Ms. No. 172, Revenue, dated 18th January 1958 may be sent to Government for approval. Accordingly this was sent to Government in Chief Conservator of Forests No. 17295/70 E 1, dated 13th June 1972. The Director of observatory has remitted rupees 1,000 in the State Bank of India, Kodaikanal on 8th September 1970.

48. *Forest village system.*—On the Javadis, the local tribal people called Malayalis have settled down in the scattered hill villages for centuries. They have been enjoying the unfettered use of the forests for grazing, cultivation, collection of small timber and fuel for demestic purposes. They held the view that the Forests and hills were their ancestral property. In order to keep the local Malayalis in good humor vast extents of the forests were left around their enclosures without reservation. The Government in their G.O. No. 719, Revenue, dated 8th August 1891 and in G.O. No. 577, Revenue, dated 6th October 1898 ordered that the Javadis plateau containing most of the Malayalis should be left for the Malayalis for the continuance of the privileges. In 1914 Mr. C. C. Wilson as working Plan Officer pointed out the necessity and importance to reserve the rich sandal tracts. But the idea of further reservation was strongly opposed by the Malayalis and then the Revenue Board Member in charge of Forests ordered that the tract should be extensively toured by the Conservator of Forests and Collector and a compromise arrived at between the Malayalis on one side and the Government on the other. An agreement was arrived at and the Forest village system was introduced as per G.O. No. 2687, Revenue, dated 3rd December 1915 and elaborated in Board's Proceedings No. 15, Miscellaneous, dated 10th January 1917 and Boards Proceedings F. No. 142, dated 6th October 1915, for the Javadis in Tirupathur Range, Tenmalais in Chengam Range and Yelegiris in Alangayam Range; under the system the hill reserves, where numerous Malayalis villages are scattered about, and enclosures are divided into convenient grazing blocks. Each village or group of villages is allotted a grazing block. The concessions granted to the Malayalis are:—

(1) They are allowed to graze their own cattle free inside the reserves and the unreserves.

(2) They are permitted to take free of charge from their respective, specified blocks, timber and fuel of unclassified species, bamboo and thatch grass, to meet their domestic and agricultural requirements.

49. These rights however are only conditional rights and the Malayalis who opt to come under this system have to abide by the following conditions to become entitled to these privileges.

(i) They shall not keep goats.

(ii) They shall not keep any foreign cattle, i.e., cattle belonging to non-Malayalis.

(iii) They shall protect the respective grazing blocks, particularly the sandal trees on them, from theft or other damage.

(iv) They shall always keep the foot paths running within their respective blocks in a fully clearned condition.

(v) They shall supply labour on payment for all departmental operations in their respective blocks and to transport the personal effects of officers on tour.

(vi) They shall promptly inform the department of any forest offences committed in their respective blocks.

(vii) At the commencement of the grazing year, the Oorgounden or Nattan of each village should deposit with the Range Officer a grazing deposit calculated at 9 paise per cow unit for all cattle in his village for which he gets a printed receipt, the deposit amount being calculated on the basis of cattle census conducted once in 3 years, without fail. Each buffaloe is counted as 2 cow units and each sheep as ½ a cow unit.

(viii) The grazing deposit is liable to forfeiture in whole or in part for bad prodection; for negligence or failure to co-operate in production work. The amount to be forefeited will depend on the degree of lapses and will be determined bs the District Forest Officer. If there is no such lapse, the grazing deposit will be returned in full at the end of the ing year.

50. Statement of grazing deposits collected, renalties imposed to the hill villages is furnished hereunder, Range-war.

Grazing Year	*Nature of amount*	*Chengam Range* Rs. P.	*Tirupathur Range* Rs. P.	*Alangayam Range* Rs. P.	*Total* Rs. p.
(1)	(2)	(3)	(4)	(5)	(6)
1961–62	Deposited	815–13	120–84	122–88	1048–85
	Forefeited	..	25–40	..	25–40
1962-63	Deposited	724–48	119–61	84–65	928–74
	Forefeited	..	33–96	..	33–96
1963–64	Deposited	724–48	119–61	84–65	928–74
	Forefeited	108–68	72–00	27–00	207–68
1964–65	Deposited	724–48	119A61	84–65	928–74
	Forefeited	..	37–00	20–50	57–50
1965–66	Deposited	1494–50	251–19	208–53	1954–24
	Forefeited	..	80–00	38–00	118–00
1966–67	Deposited	1494–50	251–21	208–53	1954–24
	Forefeited	..	129–96	30–00	159–96
1967–68	Deposited	660–80	251–25	208–53	1120–58
	Forefeited	..	198–80	..	198–80
1968–69	Deposited	..	97–45	99o60	197–05
	Forefeited	..	45–00	..	45–00
1969–70	Deposited	660–80	97–45	99–60	857–85
	Forefeited	..	60–00	..	60–03
1970–71	Deposited	729–15	97–45	99–60	926–20
	Forefeited	..	55–00	..	55–00
1971–72	Deposited	729–15	142–30	86–25	957–70
	Forefeited	..	..	..	..
1972–73	Deposited	631–28	142–30	86–25	859–83
	Forefeited	..	59–15	..	59–15
1973–74	Dvposited	631–28	141–21	101–30	873–79
	Forefeited	73–78	90–00	..	163–78
1974–75	Deposited	651–28	141–21	101–30	893–79
	Forefeited	6–50	90–00	..	96–50
975–76	Deposited	631–28	141–21	101–30	873–79
	Forefeited	..	15–00	..	15–00
Divisional Total	Deposited ..	11302–59	2233–90	1767–62	1534–11
	Forefeited ..	188–96	991–27	115–50	1295–73

Annual average Deposits ;— 1020–27

Annual average forfeiture ;— 86–38

51. Other salient features of the Forest village system are as detailed below :—

Any village is at liberty to secede from or seek admission into the system. There are 43 villages in the Division covered by the Forest village system. To any new village coming into the system grrzing blocks are allotted by the District Forest Officer. When once a forest is alloted as a grazing block under this system, cattle belonging to other villages are prohibited from grazing there even if they are covered by general grazing permits. Withdrawal from or readmission of villages into this system is to be sanctioned by the Chief Conservator of Fores with referencce to Board's Proceedings No. 285 dated 14th May 1919,

52. At the end of the grazing year, which is 30th June the graziug deposits are returned to the Oorgoundans after making dedections towardsforfeitures ordered for lapses if any by the District Forest Officer or his gazetted Assistant at a central place for each Range. At the same time deposits are collected for the following year.

53. A list of forest villages and their grazing blocks for Tirupathur, Alangayam and Chengam Ranges is given hereunder. —

Sl. No.	*Name of Village.*	*Grazing blocks allotted.*	*Area in hectares.*	*Total area (in ha.)*
		CHENGAM RANGE.		
1.	Gunreddi	Pilamarathur RF	272 758	307.561
		Unreserve	34.803	
2.	Vavakallur	Pilamarathur RF	210.437	254.952
		Unreserve	44.515	
3.	Timirimarathur	Pilamarathur RF	161.874	206.389
		Unreserve	44.515	
4.	Pilamarathur	Pilamarathur RF	379.190	552.396
		Unreserve	173.206	
5.	Kalyanamandai	Pilamarathur RF	210.437	550.373
		Nallapattu RF	155.399	
		Unreserve	184.537	
6.	Velichanur	Pilamarathur RF	331.842	396.592
		Unreserve	64.750	
7.	Vannankuttai	Pilamarathur RF	185.346	352.077
		Tenmalai RF	131.928	
		Unreserve	34.803	
8.	Kilsilambadi	Pilamarathur RF	41.683	99.148
		Unreserve	57.465	
9.	Melsilambadi	Pilamarathur RF	260.213	501.810
		Thenmalai RF	98.743	
		Unreserve	142.854	
10.	Tettur & Thoppur	Nallappattu RF	50.181	174.015
		Unreserve	123.834	
11.	Ondikuriyanur	Nallapattu RF	38.849	38.849
12.	Kuriyanur	Nallapattu RF	38.849	109,265
		Unreserve	70.416	
13.	Nallapattu	Nallapattu RF	151.352	281.256
		Unreserve	129.904	
14.	Chinnavavakuttai	Nallapattu RF	123.834	202.343
		Unreserve	78.509	
15.	Kuttathur	Nallapattu RF	108.456	234.718
		Unreserve	126.262	
16.	Kuthaneri	Nallapattu RF	68.392	184·132
		Unreserve	115·740	
17.	Valakad	Nallapattu RF	451·629	497·763
		Unreserve	46.134	
18.	Natchamalai	Nallapattu RF	207·604	207·604
19.	Paderi	Nallapattu RF	79.318	79.318
20.	Molayanur	Nallapattu RF	127,072	263.046
		Unreserve	135.974	
21.	Kilvilamuchi	Nallapattu RF	48.562	265.878
		Unreserve	217.316	
22.	Melvilamuchi	Nallapattu RF	59.893	99.552
		Unreserve	39.659	
23.	Nelthatiapet	Nallapattu RF	259.808	566.560
		Thenmalai RF	214·888	
		Unreserve	91.864	
24.	Padapanjamarathur	Thenmalai RF	244.025	314.440
		Unreserve	70.415	

Sl. No.	*Name of Village.*	*Grazing blocks allotted.*	*Area in hectares.*	*Total area (in ha.)*
25.	Pelakkanur	Thenmalai RF	161.065	248,882
		Unreserve	87.817	
26.	Mottur	Thenmalai RF	159.446	216.507
		Unreserve	57.061	
27.	Valamarathur	Nallapattu RF	22.662	383.642
		Thenmalai RF	167.540	
		Unreserve	193.440	
28.	Palayanallur	Thenmalai RF	463.770	531.353
		Unreserve	67,583	
29.	Puliyur	Thenmalai RF	384.452	650.330
		Unreserve	265.878	
30.	Kilthatiapet	Thenamalai RF	268.711	300.681
		Unreserve	31.970	
31.	Nellivoi	Thenmalai RF	715.485	875.376
		Unreserve	159.891	
32.	Erukampattu	Thenmalai RF	509.095	726.411
		Unreserve	217.317	
33.	Perumattam	Thenmalai RF	610.671 ..	610·671
34.	Melpet	Thenmalai RF	814.228 ..	814.228
35.	Chinnakilpet	Thenmalai RF	744.617 ..	744.617
36.	Kilpet (or) Periyakilpet	Thenmalai RF	936.443 ..	936.443
37.	Athipet	Thenmalai RF	665.299 ..	665.299
		TIRUPATHUR RANGE		
38.	Kodagumalai	Andiappanur RF	381.210 ..	381.210
39.	Kambuguducum Nadu	Andiappanur RF	223.790	1026.280
		Inner Javadi RF	162.280	
		Pungulam RF	263.040	
		Unreserve	377.170	
40.	Rangasamundram	Andiappanur RF	133.540	433.820
		Unreserve	300.280	
41.	Palayapalayam	Inner Javadi RF	343.580	728.440
		Unreserve	384.860	
		ALANGAYAM RANGE		
42.	Kottayur	Mangalam RF	405.500	798.860
		Jolarpet RF	364.220	
		Unreserve	29.140	
43.	Athanavur	Jolarpet RF	57.830	402.660
		Nagaluthu Extension RF	97.930	
		Unreserve	146.900	
	Total..	.. ..	.. ..	18216·467

CHAPTER II.

DESCRIPTION OF THE FOREST COMPOSITION AND CONDITION OF THE CROP.

SECTION I.

54. The Forests of the Division exhibit considerable variation in composition, quality and condition, due to altitude, Physiography and biotic influence. But the bulk of the crop is an associate formation of dry mixed deciduous species receiving constant get backs through fire, theft and over grazing. In a few favoured localities the forests attain the density and character of high forests.

55. The climate and rainfall in the plateau favour the free and abundant occurrence of sandal and bamboos which contribute to the commercial value of the Forests.

56. Forests in the plains are mostly ex-panchayat forests devoid of any useful tree growth due to proximity of villages and intense influence of biotic factors like browsing by cattle including goats and hacking of the existing growth for fuel and other agricultural implements. These forests have not recovered much even after taking over by the Forest Department.

57. The forests in the hills also suffered such denudation. Particularly along the outer slopes of hills and around many hill settlements. Frequent occurrence of fire has denuded the forest wealth and given an opening to the invasion by unwanted species like lantana, etc. Lantana in turn has invited more fire resulting in the destruction of sandal changing the ecology and composition of the natural forests in the hills. The most affected forests are Mambakkam Reserved Forest, Andiappanur Reserved Forest, Mangalam Reserved Forest, Mangalam Extension Reserved Forest, Nagaluthu Reserved Forest, Jolarpet Reserved Forest, Tenmalai Reserved Forest, etc., The major part of Inner Javadi Reserved Forest, Poongulam Reserve Forest, Ponniar Reserved Forest, Valasamalai Reserved Forest, Nallapattu Reserved Forest, Swamimalai Reserved Forest, etc., are luckily in good form of preservation.

58. It is unfortunate that the worked fuel coupes in the past have failed to re-establish through coppiee and the areas invaded by rank growth like Lantana, Pterolobium indicum, Acacia, intsia, etc. Heavy grazing and occasional fires have never allowed the secondary succession to proeed in these areas and the result is a poor sub-climax type of vegetation which appears to have firmly established.

Forest Types.

59. The following forest types are identified in this Division. The Forest types described are according to the Revised Survey of the Forests types in India by Champion and Seth.

(1) Southern Dry mixed deciduous forest 5A/C3.

(2) Secondary Dry deciduous scrub forests 5A/DSI.

(3) Tropical Dry Reverain forests 5A/ISI.

(4) Tropical (Southern) Thorn forests 6A/CI.

(5) Southern thorn scrub forests 6A/DSI.

(6) Tropical Dry Evergreen forests—Karnatic Ever green forests 7/CI.

(7) Tropical Dry Evergreen Forests Hill forests—Not classified.

(8) Tropical Dry semi evergreen Forests—Not classified.

(9) Tropical dry evergreen scrub forests 7/DSI.

(10) Man made forests (Plantations).

(1) *Southern dry mixed deciduous Forests.* (*Group 5A/C3.*)

60. The upper canopy in this climax type is a closed one though usually rather uneven and not very dense one. It is formed of admixture of species practically all of which are deciduous during the dry season. The lower canopy is likewise deciduous. An undergrowth of shrubs is usually present but enough light gets in, to permit of more or less, grass growth. Bamboos when in, to permit of more or less, Epiphytes and Ferns are absent. Chief Constituent species of this type are Albizzia amava. Anogeissus latifia Chloroxyon swietenia, Gyrocarpus jacquini. Tamarindus nidica, Emblica officinalis, Canthium didymum, Alizzja iebbeck. Zizyhus Oenoplia, Cassia fistula, Santalum album, Wrightia tinctoria, Diospyros species, Acacia arabica, etc.

This is the most extensive forest type met within this Division, mostly in the hills of Inner Javadi reserved forests Singarapet Extension reserved forests, Andiappanur reserved forests, Mambakkam reserved forest, Poongulam reserved forest, Alangayam reserved forest, Pilamarathur reserved forest, Nallapattu reserved forest, Tenmalai reserved forest, Mangalam reserved forest, Valasamalai reserved forest, Nathampalli reserved forest and P. Swamimalai reserved forest.

(2) *Southern Dry deciduous acrub forests 5A/DSI).*

61. This is the degradation stage of the dry mixed deciduous forests, which have been worked for fuel, coupes for several rotations but now reduced to poor coppice growth of trees with many stemmed shape and suppressed by rank grownth of thorny species like Ziqyphus species Dichrostachys cineraa Canthium species and more often invaded by Lantana, Acacia intsia, Pterolobium indicum, etc. These forests are seen on the outer slopes of Javadis, Poongulam reserved forest Kalrapatti reserved forest, Paramanandal reserved forest, Singarapet reserved forest, Inner Javadi reserved forest, Chinnasamudram reserved forest Mambakkam reserved forest and its extension. Andiappanur reserved forest, Alangayam reserved forest, Ravandavady reserved forest, Ponnaiyar reserved forest, Chinayampatti reserved forest, Valasamalai reserved forest, etc. Due to proximity to villages, there is continued influence of biotic factors and this does not allow the secondary succession to have its play.

(3) *Tropical Dry Riverain forests 5A/ISI*

62. These forests are restricted to river banks and parennial stream banks to a width of 1 to 2 chains. This type is formed of irregular overwood of greater height than the climax dry deciduous forests, the trees often being of larger size forming patches and strips. The foliage is more or less evergreen in several of the chief dominants. The soil is often of bare sand.

The cheif constituent species are Mangifers indiea, Terminalia arjuna, Pongamia Pinnata, Syzygium cumini etc. Typical example can be seen on the banks of Cheyyar near Kuttathur in Palamarathur reserved forest and bordering Tenmalai and Inner Javadi reserved forests.

(4) *Southern tropiccal thorn forests (6A/CI.)*

63. Bulk of the forests in degraded form in the plains in Tiruvannamalai (Whole range), Sathanur, Pinjur (A.B.C. Blocks), Royandapuram reserved forest, Radhapuram, Poomalali, Munnurmangalam of Chengam Range and Narasingapuram of Alangayam Range, fall under this type.

The cheif constituent species are Chroxylon swietenia, Albixxia amara, Acacia sundra, Acacia ferruginea Azadirachta indica, Canthium dicoccum, Erythroxylon monogynum, Zizyphus xylopyrus, Cleistanthus collinus, Dichrostachys cinerea, Atlantia monophylla etc.

Most of the constututent species are thiny trees in various stages of degradation. In portions of Ponniar reserved forest, better forms of this type can be seen. The undergrowth is characterised by the impenetrable thorny bushes.

(5) *Southern thorn scrub forests 6A/DSI.*

64. Degradation as a result of the usual maltreatment results in the formation of close almost impenetrable thorny thickets, not much different composition from the undergrowth, Spiny climbers are common. Few surviving trees stand out here and there. Much of the soil is usually bare with a thin cover of grass. Kallay soil is more common in this type of forests. This type is found in patches and often merge with southern tropical thorn forests type.

The chief constituent species are stunted Albizzia amara, Acacia sundra. Euphorbia antiquorum, Flacourta indica. Dichrostachys cinerea, Capparis species, Chloroxylon swietenia, etc. Acacia pennata and Pterolobium indicum have often invaded this type of forests, Ideal example of this type can be seen in Thippakadu reserved forest, Anamalai reserved forest, Sorakalathur reserved forest of Tiruvannamalai Range and Madakadappa reserved forest of Alangayam Range.

(6) *Tropical Dry evergreen Forests Karnatic Evergreen Forests 7/CI.*

65. These forests are found in scattered pockets in the plains. They contain high percentage of dry evergreen species though mostly of low height.

Constituent species.—Atlantia monophylla, Mimusops etengi, Alangium lamarcki, Glycosmis pentanhylla, stryphros nuxvomica, Saindus emargatus. Albizza amara, carissa spinarum, Hugomia myztox, Chomelia asiatica and little grass, etc.

Patches of this forest type can be seen in the foot hills of Inner Javadi reserved forest, Palamarathur reserved forest, Nallapattu. Tenmalai reserved forests and Dhamara kadu reserved forests in the undisturbed valleys, free from fire and other forms of serious disturbances. On the hills, found in interior of hills in valleys, well protected with deep soil.

(7) *Tropical Dry evergreen Forests: Hill Forests 7/C2.*

66. This type of forests is seen in the protected valleys in Yelagiris and Javadis, over about 600 metters in the Plateau portion. It is constituted of mostly evergreen species but with an admixture of deciduous species as well. The top canopy will be about 15 metres tall, averaging to 10 metres in most places. Usually found on tops of ridges not easily accessible Fires and influence of other biotic factors are absent. Principal constituent species are Plectroniadidyma. Memecylon umbellarum. Maba luxifolia. Strychnos nuxvomica, Diospyros, Chloroxylon, Atlantia monophylla, Mimusops clengi, Fitrus, medica, Ixoraarborea, etc.

Large areas in Tenmalai RF, Extensive areas in Singarapet Extension RF, interior of Inner Javadi RFs and Kambagudi un-reserves are covered by this forest type. There is a greater admixture of trees of lauracene consisting of litsea species. Alsiodephne. Semicar pifolia. etc., are found in Tenmalai reserved forest around Melpet. Ardiannanur, reserved forest, etc. In valleys trees grow taller up to 18 metres due to greater availablity of moisture.

(8) *Tropical dry semi evergreen Forests—Not classified.*

67. As in the case of preceding forests type, this type occurs in the better protected parts of forests in the interior portions. Occurrence of evergreen species in the middle and upper middle canopy with dry deciduous species in the top canopy can be seen in this type. This type of forests is ideally favourable to the spread and development of sandal. Bamboos also occur through these are never dominant. This type occurs in the interior of Javadis.

(9) *Tropical Dry evergreen scrub forests 7/DSI.*

68. This is a degraded stage of Karnatic Dry evergreen forests of the plains in climax form. Following maltreatment in the past, the forests have undergone great degradation and consist only low forests of coppice origin. Low thorny evergreen like Atlantia Monophylla, Dypetes sepiaria, Floucortia indica, etc., predominate along with a mixure of deciuous species like Albizzia amara, Cordia dicbotoma, Chloroxylon sweitenia, etc.

(10) *Man made forests.*

69. Large areas are converted into plantations of Eucalyptus, Tamarind, Babul and other miscellaneous species Achievements are varying depending on the locality factors, intensity of protection from fire, grazing, telling and after attention.

70. A map showing the predominant forest types from the field details collected by the Resources Survey Division by 1 per cent point sampling technique is prepared and enclosed to this plan and the areas under different forest types Range war and Reserve war are given in appendix V B, and V C respectively.

71. A chart showing the relative extent of each forest type in relation to total land areas is given opposite to this page.

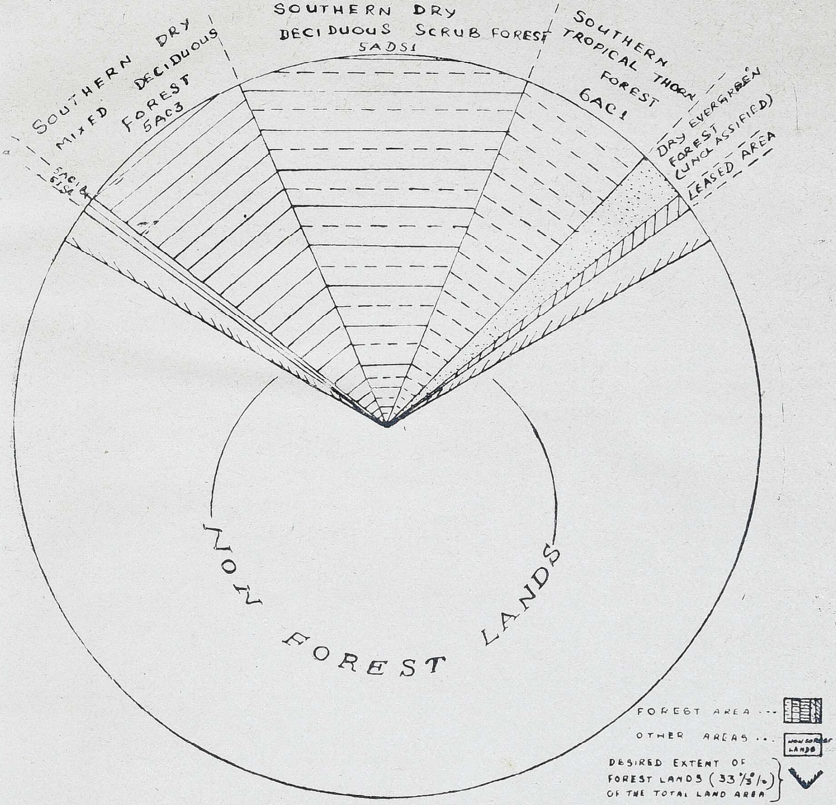
72. *Sandal crop.*—Sandal occurs in commerical quantities mostly in the plateau forests of Javadis over an altitudinal range of 700 m to 1,000 m forming the constituent of mixed deciduos forests. At lower altitude sandal occurs right up to the plains practically in almost all the reserved forests of Tirupathur, Chengam and Alangayam ranges and to some extent in Sathanur Range. In the plain forests sandal occurs exclusively of younger age classes below 30 cm girth and trees of higher age classes are rarely met with. Even before spike was unknown it was observed that the tree was generally not long lived and appeared at its prime at 60 to 75 years and attaining a girth of 100 to 125 cms in girth at breast height. But after the reported incidence and spread o the disease in the year 1971 it became a rare feature to see trees of high girth classes in a healthy condition in the forests of Javadis.

73. Near Nellivasal, spike was first observed in the year 1917 and since then, the spread of the disease was rampant practically wiping out the crop in some parts of the forests. Nellivasal and Tenmalai forests were worst affected in the past. Forests near Kavalur somehow escaped the ravage of the disease, but contrary to expectations and forecast in the past, it is heartening to note that the occurrence of spiked trees are rare now even in areas like Nellivasal where the disease was once reported to be rampant.

74. Natural regeneration of sandal is adequate in almost all the localities where sandal is found. Sandal has colonised in new areas where it was absent some decades back and has been wiped out from areas which contained dense percentage of sandal. This fact is revealed in comparing the stock maps prepared by Mr. Brand and by the current working Plan staff. In view of repeated fires and overgrazing, lantana has made an inroad into some of the RFs which form the home of sandal, inviting more and more fires and thus eliminating the natural spread of sandal. Examples could be seen in Mambakkam RFs of Tirupathur Range. Where fires are absent or very rare as in Inner Javadis RFs the natural spread of sandal is conspicuous.

LANDSCAPE SPECTRE
TIRUPATTUR DIVISION

TOTAL LAND AREA : 4098.19 SQ. KM.
TOTAL FOREST AREA : 1243.27 SQ. KM. OR 30.33%



AREA AND PERCENTAGE OF FOREST TYPES

SOUTHERN TROPICAL RIVERIAN FRINGING FORESTS	5TS1	351.04 Ha.	0.3%
" " DRY TEAK FORESTS	5 AC1B	1098.00 Ha.	0.9%
" " DRY MIXED DECIDUOUS FORESTS	5 AC 3	34910.12 Ha.	27.9%
" " DRY DECIDUOUS FORESTS	5 ADS1	51596.13 Ha.	41.9%
" " THORN FORESTS	6 AC 1	24027.98 Ha.	19.0%
TROPICAL DRY EVER GREEN FORESTS (UNCLASSIFIED)		8373.41 Ha.	7.0%
LEASED FORESTS ...		3970.50 Ha.	3.0%
		1,24,327.18 Ha.	100.0%

75. The habitat of the sandal trees is to fruit twice a year in December-January and April-May and the fruiting is abundant. The presence of Avifauna like the Koel, Myna, Hornbill, etc., help in ensuring adequate natural regeneration in its original habitat and also in its spread to new areas. The species is capable of reproducing by-means of root suckers if the lateral roots are injured. Soil like dark loam rich in humus content is deemed inhospitable to sandal while it prefers brown soil with little humus.

76. *Sandal plantation.*—Sandal plantations raised till 1971 under the prescriptions of the previous plan have not been successful. Partly this may be attributed to faulty technique and lack of foolproof protection from grazing From 1973 onwards, the results are same what promising as the areas are clearfelled of all unwanted growth and uprooting of the stumps, ploughing and planting the container plants have been done. The areas have also been properly fenced with barbed wire and that protection from grazing has been afforded. Raising of sandal container nursery has also posed some problems in the past and can be over come by the experience so far gained.

77. *Stock Mapping.*—Stock mapping of sandal in the entire Javadis was done in 1914 by Thiru C. C. Wilson and again in 1934-35 by Thiru A. R. Brand (Stock mapping and enumeration). Again stock mapping and enumeration of Mambakkam sandal series and Mottur SC II was carried out by the current working plan staff while revising the Plan. From a comparative study of these, it is clear that sandal has made inroads into new areas devoid of sandal in the past and many areas which were densely clothed with sandal in the past have been made sandal free due to the incidence of spike and fire. In the Yelagiris, which was once clothed with sandal and formd three sandal series, it is hard to find any sandal of higher girth classes at present. One fact is obvious that inspite of adds against it sandal is still able to spread and establish, particularly in the more favourable areas of Javadi as noticed in Poongulam and Inner Javadis R.Fs.

78. It is not out of place to mention here that an all India sandal seminar was held in early 1977 at Bangalore and the following are the recommendations made.

(1) To take up artificial regeneration of sandal in spike free areas on a large scale.

(2) To identify the spike resistant strains of sandal and regenerate that strain of sandal artificially on a large scale in suitable areas and (3) to cover the entire sandal zone with stock mapping and enumeration.

79. *Bamboo.*—Next to sandal, bamboos get the importance with regard to economic value of the forests of the Division. Both the species of bamboos, viz., Babusearundinaceta and Dendrocalamus strictus occur in the Division. The occurrence of both the species in the same locality is also not uncommon. But generally, Dendrocalamus strictus occurs in the outer slopes of hills and in the plains while in the interior of Plateaus, along stream banks and moist localities, Bambusa Arundinancea dominates. The quality of bamboos is not very high but all the more important in view of its abundance. Dendrocalamus strictus attain an average girth of 8 cm while Bambusa arundinacea grows to 18 cm. in girth on an average. Best distribution of bamboos is found in Natrampalli RFs, Swamimalai RF and Tenmalai R.Fs.

80. One important note worthy feature during the last plan period is the sporadic flowering of bamboos in Valasamalai BC I to BC III during 1967-68, in Singarapet Extention RFs during 1970-71 and gregarious flowering in Puliyur BC I to III during 1969-70 and Mambakkam BC I to III during 1969-70,

81. Due to excessive, improper felling of bamboos in the past by the bamboo coupe contractors, it was felt that working of bamboos coupes deserved some rest. In view of very poor stocking of bamboos and as continuous exploitation of the scattered clumps would only result in complete disappearance of bamboos, the working of all bamboo coupes in Tirupathur Division was suspended for a period of six years from 1975-76 to 1981-82 as per orders of the Chief Conservator of Forests in D.Dis. No. 6559/74 K4, dated 8th January 1975. Coupes were sold upto 1974-75 only, But allotment of coupes for extraction of dead bamboos to Sheshasayee Paper Mills, Erode, in flowered areas is being continued.

82. It is a common experience that the bamboo felling rules are honoured more in the breach than in its observance by the contractors. Effective and periodical inspections by the higher officials in more details and severely penalising the persons responsible for breaches would reduce the damage so caused and mutilation of this species especially in the more accessible areas could be eliminated.

83. *Bomboo plantations.*—In Jolarpet R.Fs: Tenmalai RFs, Mudanai RFs and Ponniar RFs, artificial regeneration of bamboos in combination with Eucalyptus hybrid has been resorted to from 1962 onwards. Departmental extraction of bamboos in the various bamboo plantation were taken up and the details of expenditure and revenue realised are furnished below:—

Year of Plantation.	*Name of RF.*	*Year of depart-mental extraction.*	*Experditure on extraction.*	*Revenue realised by sale of extracted bamboos.*
(1)	(2)	(3)	(4)	(5)
			RS.	RS.
1962	Jolarpet RF	1971–72	3,106·59	7,045·00
1963	Mudanai.	1972–73	5,637·00	7,760·00
1964	Do.	Do.	267·00	610·00
1961	P. Swamimalai	1973–74	790·00	3,000·00

During 1976 departmental extraction of bamboos was done in 1962 Jolarpet Bamboo plantation for supply to Madras city for the flood affected victims during the recent floods.

84. There is ample scope for taking up large areas in Palamarathur Extension unreserve and Kambagudi unreserve which are declared as reserved lands under section 26 of the Tamil Nadu Forest Act. The actual transfer of these forest lands to the Forest Department is pending.

85. *Teak plantations.*—Small scale teak plantations have been raised during the past in the Yelagiris, in Tenmalai reserved forests near Melpet and near Kootathoor. Some plantations are identifiable on the ground while others are not. In the existing plantations, the growth has not been very encouraging and the stems are stunted, crooked and often attacked by borers. Incidence of fires seems to be the predisposing factor for such poor results. Further planting of teak has been abandoned. A list of such plantations which are identifiable on the ground are as below:—

Year.	*Locality.*	*Extent in ha.*
(1)	(2)	(3)
1942	Tenmalai RF near melpet.	0·81
1943	Do.	0·81
1959	Palamarathur RF (near Kootathur).	2.02
1960	Do	2·02
1969	Do	6·10

86. *Eucalyptus plantations.*—Small plantations of Eucalyptus citriodora and Eucalyptus hybrid have been raised in the division in the past. Eucalyptus citriodora planted in Jolarpet reserved forests, Nagaluthu reserved forests and Mangalam reserved forests in the Yelagiris have proved successful. In Nagaluthu reserved forests (Kottur series) the plantations raised have suffered badly at the hands of illicit smugglers from villages from the plains. If protection is intensified, these plantations would have a good future.

87. Eucalyptus hybrid plantations have been raised in all the Ranges of the division with varying success, depending on the soil and rainfall conditions. Plantations raised in

Jolarpet RFs, Poomalai RFs, Govindapuram RFs and Singarapet RFs are more promising than others raised in ex-panchayat reserved forests. Many of these plantations have been worked at the end of the first rotation under coppice system.

88. The species though claimed to be a hardly one grows well only in good deep soil with fairly good rainfall. The growth is lanky in hard shallow soils. It has a tendency to put on more height growth than diameter increment in such soils. In areas adjoining villages the plantations are subjected to severe illicit felling and pollarding. Pole crops are often used as small timber for house construction by the villagers.

89. A list of Eucalyptus plantations so far raised, plantation felled after one felling cycle, condition of plantation details of cost of raising etc., are furnished in para 18 of Part II.

90. *Farm Forestry Plantation.*—This is a plan scheme under the community development project aimed at the creation of village, forest in the village common lands in order to meet the agricultural domestic and pastoral needs of the rural community in respect of Forest produce. This scheme came into operation in the year 1961-62 and is being implemented by the Forest Department with a set of special staff large areas have been tackled tackled under this scheme successfully and many areas have been exploited on a ten year rotation. Mainly lake beds and foreshores are being planted. The species mainly used is babul. In the foreshores species like Eucalyptus hybrid have also been raised. The silvicultural system mainly adopted is simple coppice.

91. A list of areas so far planted, areas already felled and revenue realised is given in the appendix XXIA.

92. *Afforestation plots.*—Under the five year programmes large scale of afforestation works were undertaken particularly in Tiruvannamalai, Sathanur and Chengam Ranges in the ex-panchayat forests. In the earlier years large areas, even 400 to 500 acres in the extent were taken at each place and plantations raised. The popular technique adopted was to clear strips 6 feet wide at 11 feet or 22 feet apart and container plants of 8 to 10 months old were planted in 1 foot cube pits at 11 feet interval along strips. Species like Neem, Vagai, Tamarind, Parambai, Babul, etc., were advocated for planting. Results of these plantations are far from satisfactory and the objective with which these works were under taken has not been achieved except in younger plantations, where the technique is modified to one of clearfelling, uprootal ploughing and planting container plants.

93. *Minor Forest produce plantations.*—Pure plantations of Tamarind under M.F.P. schemes have also been raised after clear felling, uprootal and ploughing in the various RFs. In many plantations, though the stocking is there, the plants are repeatedly browsed and seem to have no chance of establishment unless special steps are taken.

94. Past experience reveal that for successful raising of the plantations, the following factors contribute a lot.

(1) After clearfelling of the site uprootal of stumps and ploughing are essential.

(2) Closure of the area to grazing till the plants reach a safe height from the reacher grazing animals.

(3) Protection from illicit felling and theft during the course of the plantations.

(4) Frequent inspections of older plantations by officers and recording the condition of the plantations in the plantation journal for a period of atleast 10 years from the date of raising the plantations.

A full list of existing Tamarind plantations with their condition is furnished in Appendix XXII.

95. *Fuel Forests.*—Fuel working circle of the Division as it was constituted during the last plan covered an area of 23,056.58 ha. consisting 22 series.

It is seen from the yield figures of the worked coupes as furnished in Appendix XXIX most of the fuel coupes have on average yield of less than 10 tonnes per hectare. Very often most of the coupes were purchased as a rule for pilferage from adjoining areas resulting in great depletion of the good forests in the higher slopes and interior areas.

It must be admitted that the regeneration and restocking of felled coupes have mostly failed. The growing stock is impoverished and degraded, resulting in the invasion by weeds like lantana pterolobium indicum, Acacia intsia etc.

96. The process of degradation has been accelerated by illicit grazing, cutting collection of green manure, etc. Considering the fact that more and more of the Farm Forestry plantations are coming up for felling in the future years, it is decided to give sufficient rest to the fuel forests for atleast a decade to recoupe from the indiscriminate fellings of the past years.

97. In this connection it is not out of place to mention here the gist of the observation made by the Government in their letter No. 13010/FR V/71-1, dated 22nd March 1977. They have stated in their letter that at present natural Forests are being felled for various purposes on the orders of officers of the Forest Department. Sometimes such orders are based on schemes approved under the working plan or Reconnaissance plans for the forest Division. In view of the extremely limited forest cover available in the state at present. Government consider it necessary to examine the entire question of the correctness of any further felling of natural forests for what ever reasons, etc.

98. They have also observed that "the working plans and Reconnaissance plants of some of the forest Divisions provide the fuel working circle. The Natural regeneration of fuel species is extremely tardy. Now that the Farm Forestry schemes have started yielding, there does not appear to be sufficient justification any more to cut natural forests for fuel" etc.

99. The observations made are true so far as this Division is concerned and future prescriptions are more or less based on these suggestions.

100. A scheme for the departmental collection and sale of deadwood accumulated in Bamboo coupes was prepared in District Forest Officer's No. 18171/69 L, dated 16th July 1970 and approved in Chief Conservator of Forests No. R Dis. 4533/71 D1, dated 18th March 1971. During the years 1970-71 and 1971-72 a total of 1,742 tonnes of deadwood was collected at a cost of Rs. 27,195 and a Revenue of Rupees 18,654 was realised by sale during the period. The scheme, due to reported malpractices on the part of the contractors and subordinates, was suspended by the Conservator of Forests, Salem Circle in his Letter No. 17159/72 L, dated 18th August 1972 and approved in Chief Conservator of Forests No. D. Dis. 19077/72 K. dated 6th January 1973. In view of the undersidable qualities of the scheme, it shall not be renewed in future.

101. *Miscellaneous.*—The incidence of Malaria in villages in the hills and plains surrounding the forests has been under control, thanks to the Anti-Malaria measures taken from time to time. Occasional out break of Malaria was reported in 1976 round about Sathanur and Thanipadi and local staff and villagers had the pinch of it for short durations. It is interesting to mention here that in 1939 Vitex peduncularies was introduced in the Division as a remedy for the cure of the disease. Signs of planting of this species brought from Malabar are seen in Rest House Compounds.

Section 2—Injuries to which the crop is liable.

102. Injuries are caused by man, disease, plants and animals. No damages are caused by climatic factors like frost, severe drought, etc.

103. *Injuries caused by Man.*—(1) *Theft.*—Usually the forest which about village and egricultural holdings have to bear the brunt of continuous and selective removal and as a result are reduced to peripheral scrub lands. This is the state of the Forests mostly in plains, particularly in the ex-panchayat forests of Chengam, Sathanur and Tiruvannamalai Ranges. Some of the villagers living at the foot of the Javadis and Yelagiris mostly from Madapalli, Kurusilapet. Andiappanoor Jolarpet and Alangayam penerate even into the interior of the forest and steal firewood and timber of their choice. In the hills the unreserves which formed the buffer area, between reserved forests and villages have been mostly cleared for cultivation and the valuable forests have been exposed to more damage.

104. The theft by lessees of the Division by way of removal of deadwood from outside the leased area is occasional and can be controlled by proper Supervision effected by the subordinates.

105. Organised theft of sandal from the forests of this division poses a serious problem. From the time of felling, the stolenwood passes number of intermidiaries before it reaches the destination. The transport is often by cars and taxis, which arouse least suspicion and the detection in transit is difficult. The percentage of detection of these offences is much smaller, compared to the offences committed. Even in cases detected, it is found difficult to trace the main smugglers and their whereabouts, as they normally do not reveal these details even to their accomplices. Deterrent punishments of accused in prosecuted cases are lacking in courts. So much, so, the once convicted accused does not deter to commit the offence again. The offence which is now non-cognisable, if made cognisable might help in the apprehension of the accused and getting a deterrent punishment for them.

106. A statement of sandalwood cases detected and other details are furnished in Appendix VIII.

107. The damage to bamboos is mostly from the bamboo coupe contractors who reveal in violating the felling rules rather than following them. Deterrent penalties and more intensive inspections at frequent intervals by the staff would help in lessening the damage to the bamboo forests.

108. Pollarding and felling of pole crop of Eucalyptus Citriodora and Eucalyptus hybrid for use in house construction by villagers is a common danger in plantations. Kottur series in the Yelagiris had badly suffered in the past. Frequent inspection of plantations and organising special raids would help in putting an end to this damage.

109. (2) *Grazing.*—The forests of this division are subject to heavy grazing legal as well as illegal. The grazing average incidence for the period 1961-75 theoritically works out to 1.22 ha. per cow unit, taking it for granted that the grasing of licensed cattle is uniformally spread in the entire forests of this Division.

110. The year war grazing incidence and No. of cattle licensed to graze, in cow units are furnished below:—

Year.	*Number of cattles licenced to graze cow units.*	*Grazing incidence in Hectare per cow.*	
(1)	(2)	(3)	
1961–62	1,16,497	1·07	
1962–63	1,17,829	1·06	
1963–64	1,33,722	0·93	
1964–65	1,11,082	1·12	
1965–66	1,09,231	1·14	
1966–67	1,09,696	1·13	
1967–68	1,08,906	1·14	
1968–69	1,03,042	1·21	
1969–70	1,35,452	1·18	
1970–71	1,98,612	1·14	
1971–72	93,287	1·32	
1972–73	89,061	1·40	
1973–74	87,686	1·42	
1974–75	79,523	1·56	
1975–76	84,371	1·47	
Total ..	15,57,997	1·22	(Average per Annum)

111. The year-war grazing details including grazing revenue for the period (1961-62 to 1975-76) are furnished in appendix IX.

112. Considerable damage is caused by goats, particularly in the expanchayat forests of Tiruvannamalai, Sathanur and Chengam Ranges. Failure of the afforestation works done in the past can be largely attributed to this, as even plantations of 4 or 5 years old disappen due to damage by goats and other animals. A statement of goat browsing cases detected and revenue realised by Collection of C. fees in each of the Ranges is furnished in Appendix XA and X B.

113. (3) *Fire.*—This is an annual feature of the outer slope of Javadis and Yelagiris generally caused by the graziers in order to stimulate the growth of tender grass, during summer. March, April and May are the months for forest fires and the ill effects of a fire are aggrevated by heavy showers that usually fall immediately afterwards, causing the erosion of more fertile top soil particularly on the steeper slopes. In areas subjected to repeated fires in sandal tracts, sandal is completely wiped out and mass of Lantana and other weeds have taken the strong hold, which in turn invite more and more fires forming a vicious cycle. A statement of forest fires, the area burnt and the value of damage for years 1961-1975 in each Range is given in Appendix XI. A consolidated abstract of all forest offences excluding goat browing cases, year-war and compounding fees realised is furnished in Appendix XII.

INJURIES DUE TO DISEASE

114. *Spike disease.*—For the past 60 to 70 years, spike disease on sandal was prevalent in the division. The disease was first noticed on the Javadis in 1917 near Nellivasal. Since then the spread of the disease has been rampant. Tenmalai RF of Chengam Range. Mambakkam RF and Inner Javadi RF near Thagarakuppam of Tirupathur Range and Poongulam RF of Alangayam Range were worst affected. Sandal in the unreserves near Nellivasal was also affected, badly by the disease. Yelagiris which was once a rich sandal area was badly affected by the disease and at present it is hard to find a single tree of higher girth class, in those areas. It is surprising to note that the disease which had taken a heavy toll in the past seems to have subsided at present and occasionally only spiked trees are noticed in the forests. It cannot be conceived now as to whether there is going to be a change for the better or whether this lull is only a temporary phase for unknown reasons. It is better to wait and watch the significance of this.

115. A short resume on the spike disease on sandal is given in Appendix XIII.

116. *Injuries from plants*—(1) *Lantana and other weeds*—Lantana is the most ubiquitous of the plants met within the division. It has invaded the hills and plains. Any newly cleared area or an area burnt is immediately invaded by the species leaving no chance for other useful species to regenerate or establish.

(2) *Climbers.*—Thorny climbers like Pterolobium indicum, Zizyphus oenopila etc. occur densely in cleared areas and felled coupes and do not permit the coppice regenarations to establish. Loranthus and Viscum are the common pests met with in the division.

Injuries from Animals.—The animal population in the Javadis and plains is very limited. Bisons, sameher and deer cause damage to young sandal regeneration. On the whole the injury is insignificant. Cattle damage by browing and trampling of young regeneration is considerable. Birds are more beneficial than harmful in helping the dispersal of seeds of useful species and control of pests.

Section 3—Fauna.

117. The forests contain a fair amount of wild life but the big game population is rather poor. The division has been unpopular with sportsman as evidenced by the few shooting licenses issued in the past. Following are the most important among the species of wild animals either found or once found in the division.

(1) Tiger (Panthara tigria) the presence of this magnificent animal is not heard of in the recent past. They must have suffered badly in the hands of the malayalis in the past for whom poaching was a daily routine, with numerous country made illicit weapons to use.

(2) Panther (Panthera pardus) this has suffered the same fate as tigers and reported sighting of this species in the forests is very rare. This species also is on the last leg of its journey to extinction.

(3) Gaur (Bos gaurus) Few herds of these species are found on the Javadis near Melpet, Kavalur and Kambagudi, Bison meet is a taboo with the Malaylis.

(4) Sloth bear (Melursus ursinus)—This species is found to a limited extent in few localities of the division. They favour places where outcroppings of rocks and tumbled boulders offer them shelter during the hot weather and the rains.

(5) Deer (Carvidae)—The four species met with are—

(a) Sambar (Cervus unicolor)
(b) Spotted deer (Axis axis).
(c) Barking deer (Muntiacus muntjak).
(d) Mouse deer (Tragulus meminna).

Amongst these the most common is the spotted deer enjoying widest habitat covering the entire division, often found in the plains. Sambaronthe other hand confines to thicker jungle and interior locations of the plateau.

(6) Wild boar (Sus scrofa)—Found both on the plains and on the plateau of hills. Mainly feed on vegetable matter. It is perhaps the most courageous of all wild animals and when provoked will charge with rage.

118. Other species of Mammalian fauna found, include, Indian porcupine (Hystrix indica) Jungle cat (Felis chaug), wild dog (Cuon alpintus), Jackal (Canis aureus), the common mangoose (Herpestes edwardsi) Slender loris (Lories tardigradus) Bonnet macaque (Macaca radiata), etc.

119. *Reptilia*—The more common among the reptiles are the pythons, the cobras (Naja tripudjana), Russels viper (Vipera russelli), Monitor lizard (Varanus minor), Kraits, whip snakes, rat snakes and garden lizards.

120. Crocodiles (Crocodiles paulstris) are found in Sathanur Dam reservoir. Different varieties of fishes are also found in the reservoir.

121. *Avifauna.*—The avifauna of this division is rich and varied which could provide thrilling amusement to a zealous ornithologist. Same of the important and interesting birds met with commonly are the following with their Tamil names:—

(1) Grey jungle fowl (Gallus sonneratii) Kottu Kozhi.
(2) Green Pigeons (Treron Phoenicoptera).
(3) Comon cuckoo (Cuculus canorous) Kuyil.
(4) King crow (Dicrurus adsimilis) Errattaivall Kuruvi.
(5) Jungle crow (corvus macrorhychos) Andam Kakka.
(6) House crow (Corvus splendens) Kagam.
(7) Pheasant (Centropus siresis) Jamboothu.
(8) Ring dove (Strepto pelia decocto) Vellaipura.
(9) Spotted dove (Streptopelia chinensis) Manipura.
(10) Paradise fly catcher (Terpsiphone paradisi) Rajavel Kuruvi.
(11) Sparrow hawk (Accipiter nisus) Chinna valloru.
(12) Grey heron (Ardea sinerea) Narayana Pakshi, Sambanarai.
(13) Night heron (Nycticorax nycticorax) vakka, Pachai Kokku.
(14) Pond heron (Ardeola grayii) Kuruttu kokku.
(15) Hoopoe (upupa epops) Saval kuruvi.
(16) White Breasted Kingfisher (Halcyon Smyrnensis) Peru meenkothi.
(17) Pied Kingfisher (Ceryle rudis) Pori meen kothi.
(18) Brahminy kite (Haliastur indus) Garuda, Krisha.
(19) Large Indian Parakeet (Psittacula eupatria) peria kili.
(20) Green parakeet (Psittacula krameri).
(21) Rose ringed parakeet (Psictacula krameri) Sada Pachai kili.
(22) Grey partridge (Francolinus pondicerianus) Gowdari.
(23) Common pea fowl (Pavo cristatus) Mayil.
(24) Blue rock pigeon (Columbia livia) Malaipura.
(25) Black breasted or rain quail (Coturnix coromandelica Karungada.
(26) Bush quail (Perdicula asiatica) Malai Kadai.
(27) Common grey quail (Cotaurnix coturnix) Periakadai.
(28) India Robin (Saxicoloides fulicata) Kari kuruvi.
(29) Magpie robin (Copsychus saularis) Vannathi kuruvi.
(30) Shikra (Accipiter badius) Vailooru.
(31) Bay backed shrike (Lanius vittatus) Asura kili.
(32) Common wood shrike (Tephrodornis Pondicerianus) Asuraon.
(33) Great grey shrike (Lanius excubitor) Kasappukaran.
(34) House sparrow (Passer domesticus) Sittukuruvi.
(35) Yellow throated sparrow (Petronia xanthocollis) Manjathali.
(36) Palm swift (Cypsiurus parvus) Panamarathu thol kuruvi.
(37) Tailor bird (Orthotomus sutorius) Thaiyalkara kuruvi.
(38) River tern (Sterna aurantia) Mugathuvara kuruvi.
(39) Tree pie (Dendrocitta Vagabunda) Mambazhathan, Koyya Pazhathan.
(40) King or pondichery vulture (Torgos calvus) Pinanthinni Kazhugu.
(41) White backed or Bengal vulture (Gyps bengalensis) Pinanthinni Kazhugu.
(42) White scavenger vulture (Neophron perenoterus) Tholshappu Kazhugu.
(43) Common weaver bird (Ploceus philippinus) Thookanan kuruvi Attu kuruvi.
(44) Straited weaver bird (Ploceus manyar) Manjakuruvi.
(45) Golden backed wood pecker (Dinopium benghalense) Marangothi, Thachan kuruvi.
(46) Spotted owlet (Athene brama) Pulli Anthai.
(47) Barred Jungle owlet (Glaucidium radiatum) Peria Anthai.
(48) Indian great owl (Bubo bubo).
(49) Forest Eagle owl (bubo nipalensis).

(50) Brown fish owl (Bubo Zeylonensis).

(51) Barn or screech owl (Tyto alba) Anthai, Sarukuruvi, Kottan.

(52) Golden oriole (Oriolus oriolus) Mambazha kuruvi.

(53) Black headed oriole (Oriolus SP) Karupputhalai Manjakuruvi.

(54) Night jar (Caprimulgus asiaticus) Padugai Kuruvi, Pakki.

(55) Common mynah (Acridotheres tristis) Nayana Vaippul.

(56) White throated Munia (Lonchura Malabarica) Vayalatta.

(57) White backed Munia (Lonchura straita) Vellai rattinam.

(58) Spotted munia (Lonchura punctulata) Pori rattinam

(59) Rufuos bellied munia (Uroloncha Kelaartijerdoni) Thottakaran.

(60) Black headed munia (Lonchura malacca) Nellukuruvi.

(61) Indian Moorhen (Gallinula chloropus) Kanang Kozhi.

(62) Little minevet (Pericrocotus Peregrinus) Milagai chittu.

(63) Skylark (Alauda arvensis) Vanambadi pullu.

(64) Rufous tailed Finch lark (Ammamanes phoenicurus sikappu Vanambadi.

(65) Horned lark (Eremophila alpestris) Kondai Vanambadi.

(66) Yellow wattled lapwing (Vanellus Malabaricus) Manja mooku Alkatti.

(67) Red wattled lapwing (Vanellus indicus) Sigappu alkatti.

(68) Koel kite (Eudynamys scolopacea) Kuyil.

(69) Common Iora (Aegichina tiphia) Chinnamanjakurivi.

(70) Bronze winged Jacana (Metepidius indicus) Karuppu Allikaruvi.

(71) Marsh harrier (circus aeruginosus) Ponnai parunthu.

(72) Pied cresthed cuckoo Kondai (Clamator Kuyil jacobinus.)

(73) Darter on snake bird (Anhinga rufa) Pamboothara.

(74) White bellied Drongo (Dicrurus caerulescens) Kari kurivi.

(75) Cattle Egret (Bubulcus ibis) Mattu kokku.

(76) Large Egret (Egratta alaba) Peria Vellai kokku.

(77) Tiekell's Flower packer (Dicaeum Erythrorhynchos) kokku.

(78) Tiekell's Flower packer (Dicaeum Erythrorhynchos) Pakkucittu.

(79) Tree pie (Dendrocitta Vagabunda).

(80) Black Drongo (Dicrurus adsimilis).

(81) Common bhabbler (Turdoides striatus) Thavuttu kuruvi.

(82) Jungle Babbler (Turdoides striatus) Thavuttu kuruvi.

(83) White headed Babbler (Turdoides affinis) Vellaikara kuruvi.

(84) Crimson Breasted Barbet (Megalaima Haama cephala) Chinnakukuruvan.

(85) Swallows (Hirundo species).

(86) Roller (Blue Jay) (Coracias Benghalensis) Panangadai.

(87) Red whiskered Bulbul (Pycnonotus Jocosus) Semmissai Kondai Kuruvi.

(88) Pied bush chat (Saxicola Caprata) Suttinthal killi.

(89) Stone chat (Saxicola torquata) Kallukuruvi.

(90) Little cormorant (Phalacrocorax niger) Siria neerkakam.

(91) Large cormorant (Phalacrocorax carbo) Peria Neerkakam.

(92) Grey tit (Parus major).

(93) Malabar whistling thrush (Myiophoneus horsefieldii).

CHAPTER III.

UTILISATION OF FOREST PRODUCE.

Section I—Agricultural customs and wants of the people.

122. Agriculture is the main stay of the rural population, both wet and dry crops being grown. Over 90 per cent of the people are either agriculturist or agricultural labour. Total population in the tract dealt is 10,82,913 for a total landed area of 4098.19 square kilometres. It works out to 264 people per square kilometre, as against the state average of 316 and national average of 181 per square kilometre. Total forest area of the division is 1243.27 quare kilometres which amounts to 32.96 percent of the total land area as against the state average of 16.2 per cent and national average of 24 percent. The per capita forest area works out to 0.113 hectares as against the state average of 0.05 and national average of 0.13 ha. This indicates that this division has better percentage of forests than the state and national percentage, though the per capita forest is less than the national average.

123. A wide variety of agricultural crops is grown in the area. Paddy, Cholam, Kambu, Groundnut, Ragi, Samai, Thinai, Castor, Cotton and Sugarcane are the main agricultural crops raised. The rural population, with education and sophistication, have become increasingly aware and receptive to the modern ideas of agriculture and have willingly switched over to deep ploughing with tractors, chemical fertilising, sowing improved strains and varieties of seeds, the crop protective measures , where as, on the hills half hearted, rudimentary and obsolete farming still holds sway and ragi and and thinai constitute the main crop.

124. *Wants of population.*—The local population depend on the forests for meeting the following requirements viz.,

(1) Pasture and penning facilities.

(2) Small timber for building and agricultural implements.

(3) Firewood for domestic consumption.

(4) Bamboos for construction and cottage industries like basket weaving, etc.

(5) Green manure leaf.

(6) Fodder and thatch grass.

125. *Pasture and penning:*—The Villagers maintain a large number of cattle for their dairy products as well as for their farmyard manure to enrich their own lands under cultivation. Forests from the main source of feed for cattle during the cultivation season as most of the fields are under agricultural crops Therefore grazing facility forms an important requirement in the region from forests and this is provided at nominal rates. The number of animals which graze in the forests under permits is over one lakh besides, over 10,000 animals of the Malayalis who enjoy the privilege of free grazing under Forest Village system. The demand for permits starts from July onwards every year and the grazing year for official purposes is therefore fixed from 1st July of every year to 30th June of the following year.

126. The following rates are charged for local cattle with the provision that a permit entitles a person to graze his cattle throughout the division over any area other than closed.

		Till 1964–65	*From* 1965
Sheep	Per animal	Rs. 0–12	0–25
Cow	Per animal	Rs. 0–25	0–50
Buffaloe	Per animal	Rs. 0–50	1–00

127. During summer when water and fodder supply dwinrdles in accessible regions, the cattle are taken into the interior areas and penned there. Penning licenses were, issued on a nominal charge of Re. 1/– per person for a single pen regardless of the number of cattle he wants to pen till 1969–70. From 1970–71 onwards, the Government in G.O.Ms. No. 3686 Agriculture Department dated 18–12–69 have ordered that the Penning fee should be at a rate of 0.05 per cattle in addition to the usual grazing fee and that no distinction between local and foreign cattle need be made in future. This order is applicable to all forest division uniformly. The department has also repaired, deepened and maintained water sources at strategic locations as a measure of affording amenities to the cattle.

128. A list of such wells and tanks inside the RFs is given in Appendix IV. A list of pens inside the RFs and statement of penning licenses sold are given below:—

Serial No.	*Name of Pen.*	*RF in which situated.*	*Range.*	*Remarks.*
1	Pudunatham	Ponniar RF	Sathanur	Not used.
2	Elendamara Kidai	-do-	-do-	-do-
3	Eman Kottai	-do-	-do-	-do-
4	Kothapadi	-do-	-do-	-do-
5	Nagathurai	-do-	-do-	-do-
6	Pudur Paingal	-do-	-do-	-do-
7	Odai Pinta	Poongulam RF	Alangayam	-do-
8	Sethaponam	Alangayam RF	-do-	used.
9	Mattu Sathiram	Mangalam RF	-do-	Not used.

STATEMENT OF SALE OF PENNING LICENSE PERMITS

Serial Number.	*Year.*	*Locality.*	*Quantity of Gr. pts.*	*Rate.*	*Revenue.*	*Remarks.*
1	1960–61	..	..	..	..	..
2	1961–62	..	..	..	..	..
3	1962–63	..	..	..	..	..
4	1963–64	..	..	..	..	..
5	1964–65	Alangayam RF	5	1–00	5–00	One penning license rate at 1–00
		Inner Javadi RF	15	1–00	15–00	Do.
6	1965–66	Alangayam RF	20	1–00	20–00	Do.
7	1966–67	Do.	22	1–00	22–00	Do.
8	1967–68	Do.	19	1–00	19–00	Do.
9	1968–69	Do.	16	1–00	16–00	Do.
10	1969–70	Do.	..	..	..	..
11	1970–71	Do.	420 cows	0.05	21–00	One penning license at 0.05 per head of cattle.
12	1971–72	Do.	628 cows	0.05	31–40	..
13	1972–73	Do.	355 cows	0.05	17–75	Do.
14	1973–74	..	..	..	..	..
15	1974–75	Alangayam RF	269 cows	0.05	13–45	One penning license at 0.05 per cattle.
16	1975–76	..	..	..	..	..

130. On the recommendation of the Forest Advisory Committee the Government have doubled the grazing rates in G.O. No. 58072/D 11/64-4, Food and Agriculture Department, dated 18th June 1964 from the commencement of the grazing year in 1965.

131. *Small timber for building and agricultural implements.*—The normal requirements of the ryots are timber for house construction mostly in shape of posts for plough shares, various bullock cart parts, etc. For villagers scattered around the forests, the requirements are met from the illicitly removed items of these produce, as a time honoured practice. The fuel coupe contractors partly meet the requirements of ryot by supplying timber for agricultural implements according to the agreement conditions. Since the timber resources of ahis division is meagre in general, timber is also imported from Pollachi, Coimbatore and Kerala Forests.

The species commonly used for different purposes are given below:—

Plough shares—Vagai, Karuvel, Chloroxylon swittenja, Anogeissus latifolia, Velvel and Usil.

Plough shaft—Vagai and Karuvel.

Cart wheel hub—Vagai and Karuvel.

Wheel spokes and felloes—Teak and Karuvel.

Axle pieces—Karuvel, Vagai and Velvel.

Chassis—Vagai and calophyllum to-mentosum.

Top—Bamboos.

132. *Firewood for domestic consumption.*—Average villager never pays for firewood, as his requirments are met from what is available in the unreserves, patta lands and to some extent from the reserved forests; Firewood, Charcoal and to a lesser extent cowdung cake constitute the sources of domestic fuel. The firewood of good quality of size obtained from fuel coupes is usually exported to outside market like Vellore, Madras and Salem, leaving the small rejected sizes for local people to collect and sell. The Malayalis in the hill villages are permitted to remove the firewood free for their domestic use.

133. *Bamboos.*—This is the poor man's timber and widely used by villagers for roofing and side walls. Small section of the people use bamboos for making baskets, mats and thattis. Other uses to which bamboos are put are for fencing, as props for sugarcane and betel vines, bullock-cart components, scarfolding and as tent poles.

134. *Green manure leaf.*—The demand for green manure leaf is seasonal and more in demand in [illegible] [illegible], [illegible]than and Tiruvannamalai Ranges where paddy cultivation is concentrated. The species commonly used are Dodonea viscosa, Chlorozylon swietenia, Gardenia gummifera, Wrightia tincotria, Neem, etc. There are no manure leaf series under working in tihs division. The demand is mostly met with from the unreserves, exestate forests and partly from advance fuel coupes. The fuel coupes were demarcated one year in advance and worked for manure leaf at Rs. 3 per cart load and Re. 0.25 per head load. The yield and revenue obtained from sales of green manure leaf in the division from 1961–62 to 1975–76 is given in Appendix XIV.

135. *Fodder and thatch grass.*—There is demand for grass, mostly that which is used for thatching purposes. The grass is packed like a felt to a thickness cf 10–15 cms. above bamboo reaper mesh. this serves as an ideal non-conducting material insulating the interior from extremes of heat and cold. Grass is also used for brooms and fodded. The removal of monsoon grass from the Reserved Forests and Re. 0.10 per head load or Rs. 2 per cart load is permitted from 1971 onwards. Before that, the rate were half of the current rates. Statement of Revenue and yield obtaind by sale of thatch grass for the years from 1961 to 1975 is given in Appendix XV.

SECTION 2—MARKETS AND MARKETABLE PRODUCTS.

136. Important forest produce of the division include sandalwood, firewood, babmoos and minor forest produces. Tamarind forms an important item of the minor forest produce. Out side the Reserved Forest also, Tamarind form one of the important items of collection. Big timber for house construction purposes is got from Pollacchi, Malabar and other places.

137. *Sandalwood*:—Santalum album wood of Timber origin (Malayan Archipelago) is often referred to as Mascasser Sandal wood and the oil obtained from it is also the genuine Sandalwood oil. The other oils, although called sandalwood oils, are derived from woods not belonging to Santalum album (linn) and hence cannot in reality be called sandalwood oil. For instance, west Australian sandalwood is Eucarya spicatasyn santalum spicatum. The latter differs from Indian oil in chemical properties and in order to pass the minimum stand and it is blended with the oil from Santalum lanceolatum (Australian sp) Still it does not come at par with the Indian Sandal wood oil.

Sandalwood extracted from the division is transported to Tirupathur sale depot for cleaning and sale. Vellore Division and occasionally other divisions like Dharmapuri, Hosur and Salem also send their wood to Tirupathur depot for sale. Sales are held at the Tirupathur sale depot twice in a year in July and December. The Chief buyers are the export merchants from Bombay, Kanoj, Kanpur and Kuppam. The Karnataka Government represented by the Mysore sandal oil factory also compete in the open auction during the sales and are helpful in stabilising the market.

The countries which import sandalwood are mainly China, Japan, South eastern countries, United Kingdom and United States of America. The Sandal oil is imported by France, United Kingdom and United States of America.

The oil is chiefly used for soap industry, perfumery industry and drug industry. The oil is extracted by steam distillation from different parts of the wood. The oil content of the roots is more and smaller roots (Class III roots) contains more percentage of oil than class I and II roots.

There are number of sandal oil factories located at Kuppam, Kanpur, Kanoj, Mettur, Salem and Tiruvannamalai. The wood is used for carving, for grinding sandal paste for festival occasions, and eternal lamps in parsi temples. In the recent years, the price of sandal has shot up manifold and even the sapwood which was once burnt as useless in the forest, has been in great demand as the same is used for agarpathi manufacture.

A statement showing the average prices obtoined at the sales at Tirupathur from 1962 July onwards to December 1976 is furnished below;—

Year of Sale		Quantity sold		Average price per metric tonne.		Total value realised for both. Rs. P.
		Sapwood tn. kg.	Heart wood tn. kg.	Sapwood	Heartwood.	
1		2	3	4	5	6
1962	July	....	510.000	....	7936.00	4047490 50
	December	....	455.000	....	5737.00	2610360·00
1963	July	....	550.000	....	5905.00	3247764.96
	December	....	550.000	....	5514.00	3032620.00
1964	July	....	550.000	....	6183.00	3400688.75
	December	....	550.000	....	6744.00	3709302.25
1965	July		487.500	....	5746.00	2801216.50
	December	2.000	498.500	295.00	5778.00	2882446.00
1966	July	2.000	500.000	420.00	7976.00	3989007.50
	December	6.000	436.000	507.00	11013.00	4804563·75
1967	July	16.000	432.000	215.00	10823.00	4679011.00
	December	10.000	355.000	364.00	10447.00	3712213.50
1968	July	15.000	405.000	914.00	10800.00	4387888.00
	December	8.000	438.000	465.00	9788.00	4290931.00
1969	July	15.500	469.500	315.00	9538.00	4482920.00
	December	36.000	422.000	328.00	8981.00	3801637.50
1970	July	45.000	515.000	326.00	8658.00	4473711.50
	December	45.000	450·000	256.00	8545.00	3856618.50
1971	July	150.000	500.000	160.00	8212.00	4129980.00
	December	170.000	485.000	100.00	8396.00	4088870.00
1972	July	170.000	475.000	98.00	8751.00	4173352.00
	December	170.000	475.000	104.00	9940.00	4739312.00
1973	July	200.000	500·000	117.00	14310.00	7178551.50
	December	400.000	500.000	117.00	25429.00	12761432.85
1974	July	150.000	490.000	583.00	51423.00	25391625.00
	December	200.000	31.000	117.00	42670.00	1477370·00
1975	July	..	385.000	..	18767.00	7225190.00
	December	160.000	500.000	837.00	21640.00	10933705.00
1976	July	160.000	500.000	1953.00	30245.00	15434900.00
	December	130.000	550.000	1731.00	47234.00	26203985.00

The average annual output of the division for the past 15 years is 658.750 tonnes.

138. *Bamboos*:—Both species of bamboos, Dendrocalamus strictus and Bambusa arundinacea are extracted by the bamboo coupe contractors and taken out to places like Vellore, Madra- Bangalore, Salem and Tiruchirapalli. The uses to which bamboo is put are mainfold and defies description. The strength of the culms combines with lightness, the range of sizes, their straightness smoothness and the facility and regularity with which they can be split, all these qualities make bamboo readily suitable for wide variety of purposes for which other materials would require much labour and preparation. Bamboos are used for constrction of Semi Permanent and temporary buildings, basket making, fencing materials, cart yokes, axles and bodies, hanles of various kinds, tent poles and pegs, lathis, and staff furniture, mats thattis, scaffolding,etc. Bamboos from the division are also used by the Pallipalayam Paper Mills.

There is a conventional classification of bamboos accepted by the bamboo trade based on the use to which they are put. Payment to the labour by the contractors for extraction and consersion is based on this classification. The prices offered in sale of converted bamboos also vary with the classes. Following gives the trade name for different classes, their description and uses.

Bambusa arundinacea

Name of Class.	*Description.*	*Uses.*
(1) Yenikkal	15 feet long and 4" thick at base	For houses, sheds pandal and ladders.
(2) Cuddepoottu.	(a) 12 feet long and 4″ at base (b) 10 feet long and 2½″ at the base	For houses and sheds. For props in plantain topes.
(3) Dehra	18′ long and 5′ at the base (long and straight)	For touring cinema sheds, sheds, giant pandals and houses.
(4) Uruttu	Only butt end used. 10″ long and 4″ thick at the base.	For houses, sheds Pandals scaffolding.
(5) Dokku	only top end used. 15′ to 18′ long and 2″ at the base.	For houses, sheds and pandals.
(6) Pilachi	Thick splits of midportion of culms 12′ long and 1½′	For trellis work in verandhas and sheds.
(7) Othavu	Top ends 18′ to 20′ long and 3 to 4 inches thick at base straight.	For navigating boats in shallow water, for ladder, touring cinema sheds and giant pandals.
(8) Yethakkal	Mature and straight whole bamboos with rhizome in tact Rhizome tracted over fire before use. 35′ long.	For picotah poles.
(9) Peruvarai Karanai	Top ends 10′ to 20′ long and 1½ thick at base.	For houses, sheds and roofs.
Dendrocalamus strictus		
(1) Karunai	10′ long and 1″ thick at base.	For construction of huts and houses.
(2) Vittam	13′ to 14′ long and 1″ thick at base.	Used as props in betel leaf and sugercane gardens.
(3) Vethar	15′ long and 1″ thick at the base.	Used by gypsies for their sheds.
(4) Korathebbai	splits devoid of Central pith each culm giving two splits 15′ long and one inch wide.	For making baskets and thattis.
(5) Kootam	5′ to 6′ long and 2″ at base.	Used as props on the sides of bullock carts
(6) Komalkattu	15′ long and ¾″ thick at base.	for bullock cart hoods.
(7) Kathikal	Bamboo splits 5′ to 6′ long and 2″ wide. Each culm split into four.	Used in cattle pen enclosures.
(8) Patti thebbai.	Splits devoid of central pith culms 30′ long and 2″ thick at base are split into two.	Used as horizontal members for cattle pen enclosures.

139. *Fire wood*:—Very little of firewood obtained from fuel coupes is consumed locally Mostly it is exported to places like Madras, Vellore and Salem. Due to the suspension of working of fuel coupes in the division, the main source of firewood is from felling of Farm Forestry Plantations at the end of the rotation. Consequent to the increase in the area under Farm Foresty Plantations, the pressure on the forests for fuel supply is much reduced and it is hoped that in the coming years, the entire demand could be met from the working of Farm Forestry Plantntions alone.

140. *Minor Forest Produce*:—Gall-nuts (Terminalia Chebula are collected mainly from Tirupathur. Alangayam and Chengam ranges. The trees are confined to the plateau region of the avadis both in reserved foress and Patta lands.

Avaram bark and Konnai bark occur sparsely in all the hesges. Pungam seeds are available in small quantities. All ane are consumed locally in tanneries situated near VaniyamJdi, Ambur, Vellore and Ranipet.

Tamarind:—This occurs fairly well in all the ranges of the division and exported to outside the division. As this forms an important item of M.F.P. it is being sold as part of M.F.P unit, in all Ranges.

Yettikottai:—(Strychnos nuxvomica). This occurs on the Javadies both in RF and in patta lands. In Patta lands the branches are lopped repeatedly and rarely, fruits, which are important for their medicinal value, are collected.

Other items of M.F.P. like seekai, Manipungam, Pungam seeds are also available and collected by the M.F.P. contractors and disposed of locally. Honey is another item of M.F.P. which is occasionally collected.

Following are some of the important items of M.F.P. with their botonical name and use

Name of Produce	Botanical name and Part of the plant Used.	Use.
(1) Avaram Bark	Cassia auriculata	Tanning
(2) Konnai bark	Cassia fistula	Do.
(3) Gall nuts	Fruits of Terminalia Chebula	Do.
(4) Pungam	Seeds of Pongamia glabra	Oil form seed used for dressing cured leather.
(5) Surul bark	Root bark of Ventilago Madras patana.	Yields a black dye
(6) Kapilapodi	Red powder of fruits of Mallotus philippenensis	Yields yellow dye
7) Tagari	Seeds of cassia tora	A mordent in dyeing.
(8) Yettikottai	Seeds of Strychnos nuxvomica.	Yields strychine used in medicine.
(9) Theethank kottai	Seeds of Strychnos potatorum	Used in Medicine.
(10) Sarankottai	Nuts of Semecarpus and Anacardium	Acrid juice used as marking ink for linen. Also in Medicine,
(11) Nellikai	Fruits of Emblica officinalis	Used as pickles and in Ayurvedic medicine.
(12) Manipungam	Fruits of Sapindus emarginatus	Used as soapnut for washing.
(13) Seekai	Pods of Acacia concinna	Used in washing and bath.
(14) Tamarind	Fruits of Tamarindus indica seed.	Fruits edible used for cooking. Seeds used in preparing starch for paper industry etc.
(15) Woodapple	Fruits o Feronia elephantum.	Edible.
(15) Elandai	Fruits of Zizyphus mauratiana	do.
(17) Killakkai	Fruits of Carrissa carandas	do.
(18) Saraparuppu continuation	Fruits of Buchanania lanzan.	Kernal is eaten.
(19) Mahali	Roots of Asparagus racemosus	For pickles.
(20) Gajakkai	Seeds of caesalpinia bonducella	Used in medicine.
(21) Mango	Fruits of Mangifera indica	Edible.
(22) Kavadu grass (Lemon grass)	Cymbopogon citratus	Yields Lemon grass oil.

Section 3—Lines of export.

141 *Railways*:—The Southern Railway runs around the division on its four sides avoiding the hill ranges. The Broad Guage system consists of the Madras to Salem and Jolarpet to Bangalore line, the metre gauge consists of the Katpadi to Villupuram line touching Tiruvannamalai. Jolarpet and Tiruvannamalai form the main outlet for transport of Forest produce like sandalwood, fuel and bamboos by rail.

142. *Roads*:—The division is well served with a network of roads both inside and outside the forest areas. The following are the important highways of the division:—

(1) Bangalore—Madras trunk road.
(2) Madras—Salem trunk road.
(3) Tiruvannamalai—Vellore trunk Road.
(4) Alangayam—Odugathur Road.
(5) Alangayam—Vaniyambadi Road.
(6) Tirupathur—Alangayam Road.
(7) Tirupathur—Tiruvannamalai and via Chengam and Sathanur.
(8) Tiruvannamalai—Villupuram—Cuddalore road.
(9) Tiruvannamalai—Gingee—Tindivanam—Madras Road
(10) Tiruvannamalai—Tirukoilur road.
(11) Tiruvannamalai—Kanji road.

143. *Forest Roads*:—The Javadis have a good system of forest roads, most of them maintained fairly well under the gang mazdoor system. In the plains and foot hills, number of cart tracts leading to old coupes are there. Jeep tracks are formed inside the regeneration areas. Following are some of the important forest roads.

(1) Gillman road from Alangayam to Jamnamarathur.
(2) Jamnamarathur to Melpet via Kootathur and Puliyur.
(3) Melpet—Paramanandal road.
(4) Andiappanoor to Singarapet via Kambagudi, Tagarakuppam, Puliyur and Nellivasal.
(5) Andiappanur to Kavalur joining the Andiappanoor Singarapet road at Vasanthapuram.

Section 4—Methods of exploitation. and their cost.

144 *Sandalwood*:—Exploitation of Sandalwood consisting of enumeration, extraction, transport to Tirupathur sale depot, rough cleaning and final cleaning, classification and storage, is done as per sandalwood felling rules. Rough cleaning, as one of the operations to be done at the Forest depot, has been given up since 1970–71. The dead trees are extracted in the forest and transported as such or after being billeted whenever necessary i.e. when they are unweildy to the Tiruppathur sale depot for final cleaning, classification and storage. Formerly sapwood trees used to be destroyed in the forest depot after inspection by competent authority. But since December 1966 sapwood is also put up for sale at the sale depot fetching high prices. In July 1976 sales, a record average price of Rs. 1953 per tonne of sapwood was obtained.

The following statement gives the cost of various operations involved in Sandal extraction.

Enumeration:—

Serial number.	*Description of work.*	*Rate. Rs.*	*Per*
1	Perambulation for enumeration and for clearing growth around each dead sandal trees.	0.25	Hectare
2.	Marking of Sandal trees in RFs.	0.13	tree
3.	Marking of Sandal trees in Patta lands.	0.18	tree

Extraction.—

Serial number.	*Description of work.*	*Unit per.*	*Rate.*
(1)	(2)	(3)	(4)
1.	Extraction of marked sandal wood trees and transport from site to forest depot after debarking without rough cleaning.		
	Girth class	Per tree	
	1. 0– 15 cms.	Do.	0·45
	2. 16– 30 cms.	Do.	1·70
	3. 31– 45 cms.	Do.	3·60
	4. 46– 60 cms.	Do.	7·25
	5. 61– 75 cms.	Do.	13·25
	6. 76– 90 cms.	Do.	21·15
			(NOTE.—For green trees rate increased by 1/3 of the above rates.)
	7. 91–105 cms.	Do.	32·00
	8. 106–120 cms.	Do.	36·00
	9. 121–135 cms.	Do.	64·00
	10. 136–165 cms.	Do.	72·00
	11. 166–180 cms.	Do.	87·00
2.	Forming and checking length and girth of uncleaned trees in Forest Depot.	Per tree.	0·30
3.	Loading at one end and unloading at the other end of uncleaned sendal trees.	Do.	0·45
	At the Final cleaning Depot		
1.	Forming, checking length and girth of uncleaned trees while acknowledging in the F.C.D. and stacking in lots	Do.	0·35
2.	Rough cleaning uncleaned sandal trees	Tonne.	67·50
3.	Final cleaning the R.C. wood into billet root, etc., and storing the hearwood and chips, weighing them and adding them into the single lock	Do.	100·00
4.	Taking out the F.C. wood from the single lock, forming them into trees checking hammer marking weighing and adding to double lock (excluding dust and chips)	Do.	5·50

145. *Firewood.*—All the fuel coupes worked in this division are through the agency of contractors. Malayalis do not work in fuel coupes. Coupes are never worked throughly and anything less than 10 cm. girth is left in the coupe itself. Payment to labourers is made on the basis of felled and loaded produce. Payment to labour is also made on the stacked quantity. The price of fuel varies with the different markets, season to season, and the quality of the firewood.

146. *Bamboos.*—All the bamboo coupes of the division are worked through the agency of contractors with the exception of bamboo plantations which are worked departmentally. Certain coupes which are allotted to the Paper mill are worked by them generally through their contractors or agents. For marketing purposes and also to regulate the cost of collection, the contractors adopt a classification popular in bamboo trade as already mentioned.

147. *Minor Forest Produce.*—The right to collect and remove the various items of M.F.P. is sold in public auction unless allotted to co-operative societies. In the units sold to contractors, casual and part time labour is employed, to collect the produce and payments are on the outturn in terms of value, measure or weight. The collection charges paid vary from locality to locality and year to year. Whenever there is no demand for a particular item of M.F.P., if departmental collection is feasible, it will be done.

Section 5.—*Past and Current prices.*

148. *Sandalwood.*—The prices obtained for the different classes of sandalwood sold at Tirupathur sale depol from 1961 to 1976, are rnished in Appendix XVI.

CHAPTERIV

STAFF AND LABOUR SUPPLY

Section I : Staff

149. The sub-joined statement gives the strength of staff in the division belonging to the various cadres headed by the District Forest Officer as on 31st March 1976.

Besides this, there is a special Mobile Patrol Party headed by an Assistant Conservator of Forests, with one Ranger two foresters two guards, one peon and one Jeep Driver sanctioned in G.O. Ms. No. 955, Forests and Fisheries, dated 28th Decemher 1974 for protection and detection of sandal from smuggling directly under the Conservator of Forests, Salem circle.

The District Forest Officer, Crash plantation Division Vellore and District Forest Officer, Extension Forestry Division Vellore also operate within the Jurisdiction of the division in raising large scale plantations. They have overlapping jurisdiction in Vellore and Tirupathur Forest Divisions for their planting work.

There are altogether eleven Rangers in the Division staff, as tailed below —

Name of Post.	*Head Quarters of the Range Officers.*
(1)	(2)
1. Alangayam Range ..	Alangayam.
2. Tirupathur Range ..	Tirupathur.
3. Chengam Range	Chengam.
4. Sathanur Range	Sathanur Dam.
5. Tiruvannamalai Range ..	Tiruvannamalai.
6. Sandalwood depot single lock officer	Tirupathur.
7. Sandalwood single double lock Officer	Tirupathur.
8. Special duty Ranger ..	Tiruvannamalai.
9. Farm Forestry Range ..	Tiruvannamalai.
10. Droughtprone afforestation Range	Tiruvannamalai.
11. Sandal enumeration Range.	Tirupathur.

Statement showing the staff position in Tirupathur Division as on 31st March 1977.

Serial number.	*Category.*	*Sanctioned strength.* *Permanent.*	*Temporary.*	*Total.*
(1)	(2)	(3)	(4)	(5)
1.	District Forest Officer	1	..	1
2.	Assistant Conservator of Forests ..	..	1	1
3.	Range Officers	8	3	11
4.	Foresters	27	17	44
5.	Forest Guards	59	17	76
6.	Deputy Surveyor	..	1	1
7.	Head-Clerk	1	..	1
8.	Accountant	1	..	1
9.	Assistants	1	2	3
10.	Junior Assistants	12	5	17
11.	Typist	1	..	1
12.	Stenc-Typist	..	1	1
13.	Draughtsman (III) Crade	1	..	1
14.	Lorry Drivers	1	2	3
15.	Lorry cleaners	1	2	3
16.	Jeep Driver	1	..	1
17.	Tractor Driver	..	1	1
18.	Tractor cleaner	..	1	1
19.	Peons	9	3	12
20.	Reserve watchers	..	47	47
21.	Bungalow watchers	..	9	9
22.	Depot watchers	..	6	6
23.	Office watchers	..	3	3
24.	Sandalwood clerks	..	3	3
25.	Secondary Grade Teachers.. ..	1	2	3
26.	Higher Grade Teachers	6	2	8

150. In addition to the Forestets an Forest Guards employed for section charges and beat charges respectively there are foresters and forest guards employed for the various sandal felling operations and escort work of sandal from the forest depot to the final cleaning and sale depots. By convention these staff also look after protection work in the areas covered under their respective sanda series.

151. The Extension Forestry Division for North Arcot District with the object of extending Forest to outside the Reserved Forest, was sanctioned in G.O.Ms.No. 2946, Agriculture Department, dated 27-11-72 with the following establishment. This Division is functioning from 1973.

1. District Forest Officers.	1 No.
2. Forest Range Officers	3 Nos.
3. Foresters	9 Nos.
4. Last Grade Government Servants	6 Nos.
5. Head Clerk	1 No.
6. Accountant	1 No.
7. Assistants	2 Nos.
8. Junior Assistant	1 No.
9. Draughtsman	1 No.
10. Jeep Driver	1 No.

152. The crash Planatation Division which was functioning at Villupuram was shifted to Vellore as per G.O. Ms.No. 841, Forests and Fisheries and Department, dated 10-9-1975 and is functioning at Vellore from 1975 with the following establishment.

1. Assistant Conservator of Forests	1 No.
2. Range Officers	4 Nos.
3. Foresters	16 Nos.
4. Accountant	1 No.
5. Tracer	1 No.
6. Typist	1 No.
7. Peons	7 Nos.
8. Tractor Drivers	4 Nos.
9. Lorry Driver	1 No.
10 Jeep Driver	1 No.

153. In addition to the above, one Forest Range Officer, one Forester and two forest Guards are sanctioned in G. O Ms. No. 26. Forest and Fisheries, dated 7-1-77 to look after the Crocodile farm at Sathanur Dam, under the control of the Wild Life Warden, Madras.

154. Statement of sections, beats, name of RFs Head-quarters of subordinates and jurisidiction is given below;—

Serial No. (1)	Name of section, beats. (2)	Name of its headquarters. (3)	Extent in hectares. (4)	Name of Forests lying within the jurisdiction. (5)
		TIRUVANNAMALAI RANGE.		
I. Tiruvannamalai Section—Tiruvannamalai.				
1.	Sorakalathur beat.	Kariandal	2306·18	Sorakalathur R. F.
2.	Kannamadai beat.	Kattupundi	2343·55	Kannamadai R.F.
			4649.73	
II. Tippakadu Section—Tiruvannamalai				
3.	Kilnathur beat.	Velanandal	1728.68 699.03	Tippakkadu R. F. Annamalai R. F.
			2427.71	
III. Pachel Section.				
4.	Pachal beat.	Pachal	2147.08 664.51	Eraiyurmalai R. F. Uchimalai R. F.
5.	Adaiyur beat.	Periyakulam	2826.02	Kavuthimalai R.F.
			5637.61	

Section war Abstract

Tiruvannamalai Section.	4649.73 ha.
Tippakadu Section.	2427.71 ha.
Pachal Section.	5637.61 ha.
Total Area in the Range ..	12715.05 ha.

Serial No. (1)	Name of section, beats. (2)	Name of its headquarters. (3)	Extent in hectares. (4)	Name of Forests lying within the jurisdiction. (5)
		SATHANUR RANGE.		
IV. Sathanur Dam Section.		*Sathanur Dam.*		
6.	Sathanur beat.	Sathanur dam.	2627.79	Ponniar R. F. (part)
7.	Veppur beat.	Do.	2000.00	Do.
8.	Thandrampet beat.	Thandrampet	2358.98	Ponniar (Part) R.F.
			6986.77	
V. Sorapanandal—Sathanur Dam.		*Sathanur Dam.*		
9.	Sorapanandal beat.	Aryakunjur	2696.00	Ponniar (Part).
10.	Pinjur beat.	Pinjur	1006.97 759.21 338.32	Pinjur A Block. Pinjur B Block. Pinjur C Block.
			4800.50	
VI. Arattavadi Section—Arattavadi		*Arattavadi*		
11.	Thalayuthu Beat.	Porasapattu	2385.80	Ponniar R.F.(Part)
12.	Puliyampatti Beat.	Puliyampatti	3590.61	Ponniar R.F.(Part)
VII. Thanipadi Section—Thanipadi		*Shanipadi*		
13.	Reddipalayam beat.	Reddipalayam	2000.00	Ponniar R.F.(Part)
14.	Athipadi beat.	Athipadi	921.21 2102.17	ChinnayampetR.F Nathampalli R. F
15.	Beemaramapatty beat.	Beemaramapatty	3086.08	Valasamalai R.F
			8109.46	

Serial No. (1)	Name of section, beats. (2)	Name of its headquarters. (3)	Extent in hectares. (4)	Name of Forests lying within the jurisdiction. (5)
		SATHANUR RANGE—*cont.*		
VIII.	*Perungulathur Section.—Perungulathur*			
16.	Thanipady beat.	Thanipady	2000.00	Ponniar R.F.(Part)
17.	Royandapuram beat.	Pondai	1097 15	Royandapuram
			375.14	Royandapuram A
			320.92	Royandapuram B
18.	Perungulathur beat.	Navakollai	2464.35	P. Swamimalai R.F
			6257.56	
IX.	*Radhapuram.—Radhapuram*			
19.	Radhapuram beat.	Radhapuram	2601.24	Radhapuram R.F
20.	Poomalai.	Gudalur	1238.70	Poomalai R. F.
			3839·94	

Section war Abstract.

Sathanur Dam Section	6986.77
Sorappanandal Section	4800.50
Aratiavadi Section	5976.41
Thanipadi Section	8109.46
Perungulathur Section	6257.56
Radhapuram Section	3839.94
Total Area in the Range.	35970.64

CHENGAM RANGE.

Serial No. (1)	Name of section, beats. (2)	Name of its headquarters. (3)	Extent in hectares. (4)	Name of Forests lying within the jurisdiction. (5)
X.	*Pudupalayam—Pudupalayam.*			
21.	Damaraikadu beat.	Pudupalayam	2482.34	Damaraikadu R.F.
22.	Mudanai beat.	Pudupalayam	1847·05	Mudanai R.F. Part
			2646.22	Tenmalai R.F. Part.
			6975.61	
XI.	*Ravandavady—Ravandavady*			
23.	Ravandavady beat.	Ravandavady	4299.73	Ravandavady R.F.
24.	Anandavady beat.	Dhandampet	3346.46	Anandavady R.F.
			624.04	Melchengam R.F.
			8270.23	
XII.	*Cheyyar—Paramanandal.*			
25.	Cheyyar beat.	Paramanandal	1832.68	Tenmalai RF part.
			613.84	Paramanandal R.F.
			1000.00	Mudanai R F Part.
26.	Muthanur beat.	Muthanur	1091.79	Munnur mangalam R.F.
27.	Oorgoundanur beat.	Kuppanatham	2428.51	Tenmalai R.F.Part.
			6966.82	
XIII.	*Kuttathur Series—Kuttathur.*			
28.	Kuttathur Series beat.	Kuttathur	1991.93	Nallapattu R.F.
			2053.85	Palamarathur R.F.
			4045.78	

Serial No. (1)	Name of section beats. (2)	Name of its headquarters. (3)	Extent in hectacres. (4)	Name of Forests lying with in the jurisdiction. (5)
XIV. *Melpet Series.*		*Melpet*		
29.	Nellivoy series.	Melpet	4436.38	Tenmalai R.F. (Part)
			4436.38	

Section war Abstrcct.

Pudupalayam Section	6975.61
Ravanandavady Section.	8270.23
Cheyyar Section.	6966.82
Kuttathur Series.	4045.78
Melpet Series.	4436.38
Total Area in the Range.	30694.82

TIRUPATHUR RANGE.

XV. *Andiappanur.*		*Andiappanur.*		
X 30	Andiappanur beat.	Andiappanur	1926.06	Andiappanur RF(Part.)
	.Rajapalayam beat.	Rajapalayam	1926.06	Andiappanur RF (Par).13
			3852.12	
XVI. *Matrapalli Section.*		*Matrapalli*		
32.	Mambakkam beat.	Angathan valasai	1891.17 90.65	Mambakkam RF (Part.) Mambakkam Extension RF.
33.	Mottur beat.	Bommikuppam	2417.67	Mambakkam RF(Part.)
			4399.49	
XVII. *Singarapet Section.*		*Singarapet*		
34.	Singarapet beat.	Singarapet	1067.11 1724.51	Singarapet RF. SingarapetExtension RF(Part.)
35.	Govindapuram beat.	Govindapuram	932.42 1092.72	Govindapuram RF) Singarapet Extension RF(Part..)
36.	Kuppanatham beat.	Dhandampet	2405.53	Inner Javadi (Part.)
			7222.29	
XVIII. *Paramanandal Section.*		*Paramanandal*		
37.	Chennasamudram beat.	Chennasamudram	1149.99	Chennasamudram RF
38.	Nadukuppam beat.	Paramanandal	643.15	(Inner Javadi RF Part.)
39.	Thagarakuppam beat.		2394.20	Do.
		Kuppanatham	3210.88	Do.
			7398.22	

Section-war Abstract.

Andiappanur Section.	3852.12
Matrapalli Section.	4399.49
Singarapet Section.	7222.29
Paramanandal Section.	7398.22
Total area in the Range.	22872.12

Serial No. (1)	Name of section Beats. (2)	Name of its headqarters. (3	Extent in hectare. (4)	Name of the Forests lying with in the jurisdiction (5)
		ALANGAYAM RANGE.		
XIX.	*Alangayam Section.*	*Alangayam*		
40.	Alangayam beat.	Alangayam	996.59	Alangayam RF (Part.)
41.	Badakuppam beat.	Alangayam	3693.88	Alangayam RF (Part.)
42.	Vellakuttai beat.	Vellakuttai	300.28	Vellakuttai RF
			189.80	Vellakuttai Extension RF.
			731.27	Nekkanamalai Ex-Estate Forest.
			Total 5911.82	
XX.	*Mittoor Section.*	*Mittoor*		
43.	Narasingapuram beat.	Mittoor	885.07	Narasingapuram RF.
			831.25	Kalrapatty RF.
			1716.32	
XXI.	*Kavalur Section.*	*Kavalur*		
44.	Naickanur beat.	Kavalur	4057.11	Inner Javadi RF Part.
45.	Pungulam beat.	Pungulam	3724.45	Pungulam RF.
			7781.56	
XII.	*Athanavur Section.*	*Athanavur*		
46	Jolarpet beat.	Athanavur	672.20	Jolarpet RF.
47	Mangalam beat.	Mittoor	2460.57	Mangalam RF.
			570.63	Mangalam Extensiou RF Bit I.
48	Madacadappa	Madacadappa	857.55	Madacadappa RF.
			4560.55	
XXIII.	*Kottur Section.*	*Kottur*		
49.	Nagaluthu beat.	Kottur	1137.20	Nagaluthu RF.
			495.75	Nagaluthu Extension RF.
			461.35	Mangalam Extension RF Bit II.
			2094.30	

Section war Abstract.

Alangayam section.	5911.82
Mittoor section.	1716.32
Kavalur section.	7781.56
Athanavur section.	4560.55
Kottur section	2094.30
Total area in the Range ..	22064.55

RANGE WAR ABSTRACT.

Tiruvannamalai Range	12715.05
Sathanur Range.	35970.64
Chengam Range.	30694.82
Tirupathur Range.	22872.12
Alangayam Range.	22064.55
	124317.18

Section 2. Labour Supply.

155. Generally there is no dearth for labour for various forestry works except during agricultural seasons. The department usually engaged labour for regeneration works, sandalwood operations, maintenence of roads by employing gang mazdoors, departmental construction of buildings, etc. The labour in the hills is mainly malayalis/recruited from the hill villages, who are obliged to the department in return for the various concessions offered to them by the Forest village system. Fuel coupe and bamboo coupe contractors mostly employ labourers from the plains. The wages paid to the labourers are governed by the Public Works department and Forest Department, Schedule of rates, minimum wages act and the rates fixed by the Collector of the District from time to time.

156. *Malayalis of the Javadis*:—The principal inhabitants of the hill villages of Javadis are Malayalis, a name, which has no connection what so-ever with the people of Kerala state. They are not hill tribes in the strict sense of the word. There is no record of their origin. There is a belief that these Malayalis originally. belonged to Kancheepuram belonging to Vellala community of cultivators and that they took refuge in these hills when Tippu Sultan started his southern conquests. They have led acloistered existence, and developed and preserved a set of customs, all their own. They are Hindus by religion and the gods they worship are Shiva, Vishuu, Kali, Pidari Mari, Ayyanar etc. They are austere in their dress and food.

Their stable food consists of Cholam, Ragi Varagu, or samai supplemented by some vegetable preparation. They rearcows, Sheeps, Pigs buffaloes and fowls. They are not hardworking and their cultivation is not intensive or sensible. For their other daily requirements like, oil groceries etc, they usually go to the weekly markets in the plans and procure them. In the same markets they dispose of fruits like Jack, Plaintains, etc. grown by them. They live in low roofed mud hats. Slowly they are developing the habit of cleanliness in their dress and living habits. Each hamlet has an (Oorgounden or Nattam as their leader. The Forest Departmrnt has provided educational facilities and there is a Higher Elementary School at Pudur village with qualified teachers. The Malayalis have taken up to the habit of educating their children and there are few graduates and post-graduates who have gone out to eke livelihood. Their marriage customs do not differ much from others in plains and enthusiasm in celebrating customary festivals is noteworthy. They do not believe is divorces. Dead are buried and not cremated. They supplment their earning from the land, by wages they get from forest Department or other contractors. They posseessed lot of unlicensed guns and during a recent round up, the Police seized number of them. When unchecked, they poach and kill animals like pigs, deer, etc., for food. They do not eat bison meat and so bisions are not killed by them. The are generally timid and major crimes committed by them are unheard of. Diseases like Malaria, Guinea worm infection, etc., are common They do not depend on others for rendering essential services. The duties of barber, dhoby and mid-wife are performed by people of their own caste.

CHAPTER V.

PAST SYSTEMS OF MANAGEMENT.

Section 1—General History of the Forests.

157. *Early period.*—There is very little information available about the early history of the district. From the dim and remote peirod of stone age, man must have been living in the district. It was the time when this part of the country was a stretch of forests that harboured a vairety of game, big and small, which became the target of early hunting man. Polished stone axes and other materials used by those men, excavated by the Archaeological Survey of India in the district is said to belong to Neolithic period and estimated as atleast 4000 years old by carbon 14 determination. This period was succeeded by vion age along with which agriculture and rearing of domesticated animals was also started. That was the beginning of agriculture and shrinking of forest land in this part of the country.

158. *Medieval period.*—From the historic period this district must have had its own charm for its economic and strategic importance. It came under the hegemony of various kinds including Rashtrakutas, Pallavas and Cholas and changed hands in successive battles, as could be seen in the various epigraphs left in this district. In the middle of the 17th century, it came under Vijayanagar Empire.

159. *Modren period.*—In the eighteenth century, the English and French vied with each other for supremacy in India. In fact the system of indirect rule into which the British Empire was to develop in later years came into being by the accidental circumstances of intervention in Arcot over the succession to the Carnatic Governorship. With this back ground, the acquisition of the North Arcot district by the East India Company was completed on the 31st July 1801, when Asin-Ul-Umara, uncle and successor to the last Nawab of Carnatic, surrendered the whole of his civil and military authority in return for a stipendiary allowance of one fifth of the estimated revenue from the territory. From then onwards, North Arcot had remained under British authority till 1947 when the country became independent.

160. For long after the assumption by the British, nothing much was done for a good administration. People could cut and remove whatever they wanted from the forests, Grazing, felling, burning and cultivation were freely allowed inside the forests. Until 1844 the only tax upon timber and fuel was that collected as Land Customs (duties on imports and goods in transit). Subsequently when land customs were abolished, felling greatly increased and became so indiscriminate that Mr. Lorrel the then Colletor, (1946) directed that the jungles should be taken over by the Tahsildars and only trees fit to be felled, would be permitted for felling on the recommendation of village officers. A small amount as tax was also levied on such fellings.

161. In 1862, Jugle Conservancy Rules of 1860, were enforced by the then Collector, Mr. J. D. Robinson who fixed new rates of seigniorage and made some changes and called in the 'Manigar Rangers' and 'Yenadigilly' systems. The jugle conservancy rules of 1860 were formulated by the Board of Revenue in their circular No. 5497/1860 to bring uniformity in the treatment of forests and were enforced by the Collectors of the Districts. This was the first step towards the forest conservation. The rules are summarised as follows:—

(*a*) No timber exceeding 3 feet in girth at a height of 2 feet from ground level nor any reserved tree in any jungle belonging to the Government may be felled without the permission of the Public Officer deputed for the puropse.

(*b*) Villagers may take free fuel and brushwood from low jungles for domestic purposes but not for sale.

(*c*) Charcoal burners may fell trees from places assigned to them by competent authority. Reserved trees were prohibited from felling, one anna per basket of Charcoal was to be paid as seigniorage fee.

(*d*) Bonafide ryots, were permitted to fell the necessary wood required for the construction of their own houses. They should leave 29 standard per acre on the exploited area.

(*e*) Timber for agricultural implements and bamboos for domestic use were allowde to be removed free.

(*f*) No fruit trees should be felled or injured.

(*g*) Trees reserved for their wood were Ebony, Satinwood, Teak, Rosewood, Palmyrah, Jack, Attocarpus Kirsuta, Terminalia, Bellarica, Terminalia paniculata, Acacia arabica, Acacia catechu, Albizzia lebbeck and Hardwickia binata.

(*h*) Trees reserved for value of their products were Anona squlamosa, Psidium guava, Sapindus emarginatus, Bassia latifolia, Cashew, Acacia concinna, Tamarind, Calophyllum inophyllum, Strychnospotatorum and Mallotus hillipenesis.

(*i*) Fuel and bamboos for sale could be cut after paying seigniorage fee of 31 naya paise per cart load 6 naya paise per bullock load and 2 paise per head load.

(*j*) On timber cut for sale a seignorage fee of one rupee per cart load was to be paid.

(*k*) The collection of revenue was to be done by the village headman who would be paid 20 per cent of the revenue collected as his commission.

Any misappropriation on his part was punishable under Regulation IX of 1882.

(*l*) Unauthorised cutting on the jungles or evading to pay the seigniorage was made punishable for tresspass and fraud according to the penal code.

(*m*) The revenue collected from these sources was allotted to the jungle conservancy fund and was to be utilised for raising new plantations and improving existing ones. Plantations were to be raised closed to villages to relieve scarcity of firewood. The Collector was authorised to administer the fund subject to an annual report to the Board of Revenue.

This system did not work successfully. Denudation continued as before. These rules were in force even after few years after the Madras Forest Act was passed in 1882.

162. *Period subsequent to the passing of Madras Forest Act of* 1982.—To begin with the Forest Department was under the Board of Revenue and most forest matters were dealt with by the staff of the Collector. The first reservation took place in 1886 when Jolarpet, Narasingapuram, Madacadappa and Mangalam Forests were notified under section 16 of the Madras Forest Act. During the subsequent years most of the forests were resumed and brought under strict control of the forest staff till 1906.

163. *Administrative changes.*—From 1865 to 1911, the North Arcot Forest Division covered the entire area of North Arcot with the Headquarters of the division at Chittoor. In 1911 the revenue district was bifurcated into North Arcot and Chittoor districts and the Forest Division was bifurcated accordingly and designated. The headquarters of the divisions were Vellore and Chittoor. During the same year, i.e., 1911 the North Arcot Forest Division was bifurcated and designated as North and South Vellore Divisions with headquarters for both at Vellore. On 1st April 1917, South Vellore Division was further divided into South Vellore Division and West Vellore Division with Headquarters at Vellore and Tirupathur respectively. In July 1926 owing to transfer of large number of reserved forests to Panchayat management, and also, for financial reasons, Vellore North, Vellore West

and Vellore South Divisions were amalgamated into one division with Headquarters at Vellore. Again in 1932, it was felt that the division was unweildly and was divided into Vellore East and Vellore West Divisions with Headquarters at Vellore and Tirupathur respectively. Thirupathur, Alangayam and Chengam Ranges continued to be in this division mostly. Krishnagiri Range was in the division from 1920 to 1929 and again from 1933 to 1939. Harur Range was added to this division in 1939 and transferred to Dharmapuri Division from 1st November 1968. Thiruvannamalai Range which was in this division was added from Vellore Division, in 1956. On 15th April 1959 when Cuddalore North Division was formed, Tiruvannamalai Range was transferred from Vellore West Division to Cuddalore North Division and again got re-transferred to Tirupathur Division with effect from 1st November 1968. The present Sathanur Range was formed in the year 1975 with Headquarters at Sathanur Dam and added to this Division. Thus the jurisdiction and size of the division changed many times.

164. Between 1923 and 1928 all ex-panchayat forests of today were transferred to Panchayat management. It happened like this: The Forest Committee of 1912 emphasized the need for reducing to the minimum, the contact between the forest subordinate and the villagers and recommend that the reserved forest should be classified according to their nature and situation and the objects they were intended to serve, and that the management of the forests which were reserved principally to ensure a continued supply of grazing, fuel and agricultural requisites, should be entrusted to panchayats composed of resident cattle owners. In persuance of this recommendation, certain minor forests of the State were transferred to Panchayat management in 1914. In 1923, the Retrenchment Committee gave a greater fillip to this policy, for upon its recommendation, a general reclassification of the forests of the then Madras Province was ordered. In 1925 a special officer was appointed to examine and classify the forests of the province into three classes. Of these, the first two were to be retained permanently under the contorl of the Forest Department and the third which was intended to supply the requirements of the ryots was called the 'ryots forests' and placed under the Panchayats.

165. This proved to be a retrograde step and Sir Denial photographs of these forests before handing over to the panchain no uncertain terms. He went to the extent of taking photograph of these forests before handing over to the panchayats and gave the copies of photographs to the Board of Revenue for comparing the condition of the forests on a later date after some years of Panchayat Management to study the folloy of the decision. What he surmised came true as could be judged by the conditions of the forests while taking back these forests from the panchayat in the year 1950 as per G.O. Ms. No. 2287, Development, dated 29th August 1950.

166. *Introduction of Working Plans.*—The first series of working plans were from the year 1901 when the working plans were written for certain Reserved Forests only to cover certain important forest produces like sandal, bamboos, etc. Prior to 1915 there were number of working Plans pertaining to different forest produces in each division. Ouly in the year 1924 a more or less complete form of Working Plan written by Thiru D. L. Sathe was sanctioned though sandalwood was not covered by this as there were other plans to cover this species. The first ever Working Plan which could be called complete in the real sense of work was that of Thiru A. R. Brand which came into force from the year 1937. This was revised by Thiru Ramakrishnan and Thiru Rajasingh in later years. During the last plan period, Thiru K. R. Venkatesan's Plan for Cuddalore Division was in force for Tiruvannamalai range as it was then in Cuddalore Division.

SECTION 2—PAST SYSTEM OF MANAGAMENT AND THEIR RSEULTS.

167-A. *Sandal Forests.*—There is no record to show of any operation of sandalwood in these forests prior to 1900. Only between 1900 and 1904, for the first time, departmental working of sandal on Javadis in Chengam and Polur Ranges was undertaken. In Tirupathur Range an attempt to work sandal through contractors' agency was a failure.

168. In 1904 Thiru Rama Rao's Working Plan for Tirupathur Range and in 1905 Thiru V. S. Gurunathan Pillai's Working Plan for Chengam and Polur Ranges were put into force and remained in force till 1915. These plans prescribed extraction of dead and dying trees and all green trees over 36 inches in girth at 4 feet from ground level. Artificial regeneration by sowing of seeds in bushes in cleared and prepared blocks of 10 acres in the Nagaluthu Reserved Forest Yelagiris was done. As this proved a failure, this work was given up subsequently. The process of extraction, billetting and marking was done in accordance with the set of rules as prescribed by Thiru Rama Rao's and issued by Thiru F. A. Lodge in the Salem district as the "Standing Order on Sandal Operation". The present rules are more or less derived from this. Thiru C. C. Wilson's Working Plan for Sandal was in force from 1915 to 1937 for Alangayam, Tirupathur and Chengam. This prescribed a six year felling cycle for Tirupathur and Chengam Ranges and three year felling cycle for Alangayam Range. This variation was to get equal annual yield. There were nine felling series in all and each year nine coupes were worked. The area of the coupes varied largely. The extraction of dying trees was stopped in 1928. In 1917 and 1918 extraction of trees was suspended as large number of trees were blown of by cyclone in the previous year.

169. Till 1922 tending was done in the coupe in the year subsequent to extraction. But subsequently this work was carried out while enumerating and marking trees for extraction in the coupe.

170. It was also prescribed that around selected seed bearers, soil should be raked and sown with sandal seeds and that for three years following this operation, the area tion of overhead shade, climbers, etc. This method did should be gone over every year to clear the young regenera- not prove successful. In 1927 Thiru H. A. Latham ordered that each subordinate should produce at least one acre of established sandal regeneration in his beat. To some extent this was successful.

171. *Thiru Brand's Working Plan.*—This was in force from 1937 to 1950. This prescribed the removal of dead trees only. For reserves and unreserves the felling cycle was fixed as 3 years for Yelagiris, and six years for Javadis. Ten felling series were prescribed and sandal on patta lands were to be extracted annually. Fire protection methods and tending in sandal coupe were prescribed.

The prescriptions were followed almost completely, in all respects. Spike was at its height during the period and control measures like spotting of diseased trees, lopping trees to induce manifestation of disease, killing diseased trees with atlas solution, etc., were carried out extensively during the period. By 1944 spike had spread over the entire Javadis and Yelagiris. Till 1941-42 sandal extraction was done according to Working Plan prescriptions. But after that normal working was suspended and only trees which were spiked were extracted due to large scale attack of spike. There was no prescription for regenerating sandal artificially and only efforts were taken by certain individual officers, to get the sandal seeds sown in bushes, occasionally.

172. *Thiru Ramakrishnan's Plan.*—This came into force in 1950. In this Plan no control measures to check the spread of spike disease were prescribed as was done in Thiru Brand's. To find out whether sandal was spreading by itself, 17 sample plots were laid out in the division and a record of all sandal trees in them were enumerated and recorded in the various girth classes. The location of all the plots were given in the working Plan maps. The field staff were expected to keep the boundaries of the plots cleared and fire protected. Unfortunately, this work which was started with such good objective and faith was considered useless subsequently and further follow up action was discontinued.

Excluding Harur Range there were 10 felling series. Each of the series in Yelagiri was divided into three coupes, while, on the Javadis, each series was divided into six coupes. Trees of 6" in girth and over to be extracted. Roots with less than ½ rupee size of heartwood were to be left in the field itself.

Prescriptions were followed in general. In the year 1954-55, to prevent smuggling of Sandal from the more vulnerable areas, the Conservator of Forests, Salem circle ordered that the Sandal in vulnerable areas alone need be extracted and that the regular coupes need not be worked. But this was changed in the ensuing year and all regular coupes including the arrear coupes were exploited and from the year 1957 onwards normal working according to Working Plan, prescription was resorted to.

173. *Thiru Raja Singh's Plan.*—This is in force from the year 1964 to date and covers the division as it was then i.e., including Alangayam, Tirupathur, Chengam, Sathanur and Harur Ranges excluding Tiruvannamalai Range. In 1968 Harur Range was transferred to Dharmapuri Division and Tiruvannamalai Range from Cuddalore Division was retransferred to Tirupathur Division. For Tiruvannamalai Range the prescriptions of Thiru K. R. Venkatesan's Plan for Cuddalore North Division were followed.

174. Thiru Rajasingh's Plan covered the sandal tracts in the reserved forests and unreserves. There are seven village series and 20 Reserve series as detailed below :—

RESERVE SERIES.

Sl. No. (1)	*Name of Sandal series.* (2)	*Area in ha.* (3)	*Location.* (4)
	Tirupathur Range.		
1.	Singarapet	4449.11	Govindapuram, Singarapet Extension reserves.
2.	Puliyur	2780.88	Inner Javadis and Chinnasamudram reserves.
3.	Nadukuppam	1245-62	Inner Javadis reserve.
4.	Thagarakuppam	832.03	Do
5.	Andiappanur	1909.71	Andiappanur reserve.
6.	Rajapalayam	1628.86	Do
7.	Mottur	2132.26	Mambakkam reserve.
8.	Mambakkam	1897.53	Mambakkam and Mambakkam Extension reserves.
9.	Kambugudi un-reserve.	1267.88	Kambugudi unreserves excluding survey fields.
10.	Pudur village	2100.71	Puliyur unreserves excluding survey fields.
11.	Kambugudi village	1537.81	Survey fields of Pungampattu Nad, excluding Vasanthapuram village.
12.	Pudur village	1978.91	Survey fields of Pudur Nad (Inclusion of Mambakkam unreserve).
13.	Pudur village	1780.61	Survey fields of Nellivasal Nad.
	Alangayam Range.		
14.	Vasanthapuram	1648.68	Inner Javadis and Pungulam reserves.
15.	Kottur	1408.31	Nagaluthu, Nagaluthu Extension Mangalam and Mangalam Extension reserves.
16.	Athanavur	904.46	Jolarpet and Mangalam reserves.
17.	Yelegiri village	1934.39	Unreserves and survey fields in the Yelegiris. Also other survey fields in the range.
	Chengam Range.		
18.	Kottathur	1912.14	Palamarathur and Tenmalai reserves.
19.	Thalur	798.03	Tenmalai reserve
20.	Perumattam	825.15	Tenmalai reserve
21.	Melpet	861.55	Tenmalai reserve
22.	Athipet	999·98	Tenmalai reserve
23.	Nellivoy	1408.32	Tenmalai and Nallapattu reserves
24.	Nallapattu	1527.68	Nallapattu reserve
25.	Palamarathur village	2358.44	Unreserves and Survey fields of Palamarathur and Vannankuttai enclosures.
26.	Melpet village	1025.46	Survey fields of Padapanjamarathur, Puliyur, Erukampet, Perumattam, Chinnakilpet and Melpet enclosures.
27.	Nellivoy village	462.15	Survey fields of Kilpet Athipet, Kilthattiapet and Melthattiapet enclosures.

The village series were worked anually while the reserve series are divided into 3 coupes each and each coupe to be worked annually on a three year felling cycle. Areas which were found not fit to be constituted as a series as in Valasamalaj and Nathampalli Reserve Forests of Sathanur Range are to be gone over once in 3 years and all dead Sandal are to be extracted. All exploitation was confined to removal to dead trees only without an opportunity to apply the traditional principles of forest management. Exploitation was regulated entirely by area regulating the outturn. Departmental extraction as before was prescribed. Dead trees over 3 inches in girth at breast height will be enumerated and extracted. All fallen branches and stems of Sandal wood 3" and over in girth at but end will be collected. Tending is prescribed according to which all sandal trees 4 feet in height would be tended on a 3 year cycle. This includes cutting down of all climbers on trees and freeing the crowns of all overhanging branches of other species suppressing the sandal, by cutting them down.

175. Artificial regeneration of sandal in Inner Javadis Reserved Forest was prescribed by cutting 6 feet wide strip lines 33 feet apart and sowing seeds at 22 inches interval along strips in cleared patches slightly away from the strip. Till 1970 the prescriptions were followed though in latter years instead of direct sowing, planting container seedlings was adopted. As the plantations were a failure, further planting under these prescriptions were discontinued. From 1973 onwards, sandal regeneration was resumed in Mandarakuttai area in Inner Javadi Reserved Forest with fair amount of success. The technique is to clear all unwanted growth leaving important tree species, burning the cut materials in heaps. Ploughing the soil, planting container plants at an espacement of 4 m. by 4 m. and fencing with barbed wire fixed on wooden posts, etc. In addition from 1972 onwards, sizable plots were taken in sandal areas for tending which included freeing of natural seedlings and saplings of sandal from suppression, climber cutting and fencing. Certain selected trees over 30 cm. in girth were taken and around them trenches were dug at 15 feet radius, trenches being one foot deep and one foot wide, to induce production of root suckers.

176. There was, temporary suspension of sandal extraction work during some years either for want of sufficient finance in the budget provision or due to over accumulation of sandalwood stock at the final cleaning and sale depot. Working of 12 coupes in Chengam, Alangayam and Tirupathur Ranges during 1965–66 and the remaining coupes during 1966–67 were suspended as per orders of the Chief Conservator of Forests in No. 8437/65 D-3, dated 11th December 1965. During 1968–69 and 1969–70 the extraction was dropped in Chief Conservator of Forests' No. 71137/68 U-3, dated 23rd October 1968 and Chief Conservator of Forests, No. 4965/69 U-3, dated 12th March 1969 due to large quantity of rough cleaned wood accumulated in the Sandalwood Depot. However, the extraction in the village felling series continued without interruption.

177. In Chief Conservator of Forests Reference No. D-3/1158/69, dated 17th January 1969 it has been ordered that from 1969-70 onwards, extraction of sandalwood without rough cleaning at site and transport of the extracted sandalwood to final cleaning depot for removal of sapwood and dressing heartwood to be followed for all coupes. The extracted sandalwood should be debarked at site and whole tree or billeted to convenient sizes should be transported to the final cleaning depot. In Conservator of Forests, Salem Circle's Circular No. 5/70, dated 11th March 1970 instructions are given not to weigh the trees at the Forest Depot but only to record the entire length and girth of each tree or piece of a tree in the 'E' and 'C'. Form and transport to the final cleaning depot. The acknowledgement given by the final cleaning Depot Keeper should also be in terms of length and girth only for each tree. No weighment will be done at this stage. A list of trees with no heartwood at all (sapwood trees) should be furnished by the Forest Depot Keeper in the 'E' and 'C' forms. The first weighment should be immediately after rough cleaning and from this stage onwards accounts to be maintained as usual. Rates of extraction and transport will be sanctioned on number of tree and not on the basis of weight of wood transported.

178. *Final cleaning work in Sandal Depot.*—Uu to 1970–71 the final cleaning operation at the Final Cleaning Depot was done through the agency of contractors after calling for tenders. But in view of the orders issued the Government Memo No. 93417/D IV/70-3, Agriculture, dated 26th October 1970 final cleaning operations are being carried out departmentally on muster roll.

179. *Patta sandalwood.*—Thiru C. C. Wilson in his Working Plan for South Vellore sanctioned by the Board of Revenue (Land Revenue) Forest No. 172, dated 13th December 1915 has recommended that sandal trees standing on Patta land, for which patta was granted prior to 1906, should be purchased by Government, at rates to be fixed, so as to reduce the possibility of merchants, purchasing these sandal trees and smuggling sandal trees from Government lands along with the purchased sandal trees.

180. In Ramakrishnan's Plan in paragraph 323 it is stated that there are 261 sandal trees to be extracted from the sandal trees purchased by the Government. Of these, 69 trees were extracted prior to 1960 and another 16 trees were extracted between 1960–62 leaving a balance of 176 trees. Out of these between 1963–67, 56 trees were extracted leaving a balance of 120 trees. By 1972, 117 trees were extracted and the balance 3 trees are reported to be green and hence not extracted.

181. The work of enumerating all the patta sandalwood in the division was taken up by a special duty ranger and staff sanctioned for the purpose. This work was completed for Tirupathur taluk but before this work could be taken up for Chengam taluk as the period of sanction expired, the staff had to be disbanded. This important work requires resumption. Statements giving names of villages, survey numbers, total numbers of sandal trees, number of dead trees for each patta lands, and in Government lands other than Reserved Forests, with village-war abstracts for Tirupathur taluk are furnished in Appendices XVII A XVII B. A register containing details of all the trees in the survey numbers regarding girth, height and ownership, is maintained, in the District Forest Office for follow up action.

182. From the year 1971 onwards, sapwood of sandal which was left in the forest, was brought to the Sale Depot and sold in auction along with heartwood and the prices fetched has soared up in the recent years fetching as much as Rs. 2,000 per tonne.

183 *B. Exploitation of Bamboos.*—Till 1862 there has been no control on bamboo forest of the Division. When the jungle conservency rules of 1860 was enforced in 1862, bamboos could be removed free, though, for sale a seighniorage fee was levied. In 1890 this permit system was stopped and contract system was introduced for the first time. The bamboo forests were divided into convenient blocks and each block was sold on a two years' lease. A rule that a minimum of 8 culms should be left each clump was introduced, though this was never observed. This brought about clear felling of clumps and combined with the short-felling cycle, brought about a grave deterioration of the bamboo forests necessitating the adoption of five year felling cycle in the Working Plans which followed.

184. *Early Working Plans.*—To recoupe the degraded bamboo forests which were over worked prior to 1901, the early working plans presribed a 5 year felling cycle. This continued until 1913 except for the unreserves of Puliyur, Kambugudi in Tirupathur Javadis and Mandarakuttai in Alangayam Range, and for Yelagiris, where the two year felling cycle till applied, as they were not included in any Working Plan. There were number of Working Plans to control the bamboo working in the whole division as constituted today. In 1933 the felling cycle was reduced to 3 years and from then it has struck on. In the year 1907. to help the contractors to invest on laying out extraction roads and to organise labour and recover advances paid to them, the system of triennial lease was introduced though the contractors were allowed to work only one coupe each year.

185. *Later Plans.*—From 1924 to 1937, Alangayam, Tirupathur and Chengam Ranges were controlled by Thiru D. L. Sathe's Plan. The unreserves on the hills were also brought within this working circle. There were 25 series and each series was divided into 3 coupes. Prescriptions were to leave 6 mature culms and all culms less than one year to be left uncut.

186. *Thiru Brand's Plan.*—From 1937 to 1950, Alangayam, Tirupathur and Chengam Ranges were covered under this Plan. The choice of working the coupes on annual or triennid lease was left 4 mature culms in each culmp and all culms less than one year are to be left uncut. In the year 1946 under orders from the Chief Conservator of Forests, the system of triennial lease was abolished anu annual leases were established. To help extension from inaccessible areas, Kambugudi-Pulianur Road and Kutathur-Puliyur Road were constructed.

187. *Thiru Ramakrishnan's Plan.*—The felling cycle and Plan. A road from Puliyur to Paramanandal (via) Melpes Plan. A road from Puiyur to Paramanandal (via) Melpet on the Tenmalais was prescribed. Similarly a road from Malayandipatti to Nellivasal was prescribed.

188. ***Thiru Rajasingh's Plan.***—Consequent to the enactment of the Madras Panchayat Act of 1958 which came into force in 1960, all unreserved forests shall vest with the Panchayat management. Till that date the management of all unreserves with regard to administration, exploitation, improvement and control were with the Forest Department. But the Government in their Memorandum No. 10299/D.111/61-4, Food and Agriculture, dated 15th February 1961 gave clear orders to the Forest Department, not to include unreserves and Government porombokes in the prescriptions of the Working Plan. However, in view of the fact that proposals are there to reserve these unreserves, these areas were also included in the Working Plan maps with the provision that the prescriptions of the Working Plan will only apply if and when the forest department regains control in the future. The unreserves were marked as separate coupes without mixing them up with reserves. Any how the sale of the coupes continued to be held by the District Forest Officer, Tirupathur and accounted for. Following are the bamboo coupes in the unreserves:—

Name of unreserve (1)	*Bamboo coupe in which included.* (2)	*R nge.* (3)
Kambugudi	Kambukudi I, II, III	Tirupathur
Puliyur (Part)	Puliyur I, II, III	Do.
Puliyur (Part)	Singarapet III	Do.
Yelagiris	Yelagiisr I, II, III	Alangayam
Palamarathur	Palamarathur I, II & III	Chengam

189. *Supply of bamboos to Messrs. Seshasayee Paper and Boards Limited.*—During 1962-63 the Forest Department undertook to supply bamboos to the Paper Mill at Pallipalayam. In Tirupathur Division 21 bamboo coupes were sold in auction with condition that the contractor of each coupes should supply a specified quantity of bamboos to the Paper Mill at Rs. 31.50 per tonne or air dry bamboo. In addition the mill has to pay Re. 0.35 per tonne per mile towards transport charges and for bad road, an additional rate of Re. 0.05 per tonne for mile. Out of this Rs. 31.50 per tonne payable by the Mill Rs. 24.60 per tonnes is to the contractor who supply the bamboo and the balance amount of Rs. 6.90 per tonne is collected by the Forest Department as seigniorage from the company. From 1973 the seigniorage rate is Rs. 11 per tonne.

The supply made till 1975 from the division as it existed then, is a follows:—

Year. (1)	*Quantity fixed in tones.* (2)	*Quantity supplied in tones.* (3)	
1962–63	6554.200	4048.192	Including Harur Range
1963–64	5450.000	4324.749	
1964–65	6530·000	3424.773	
1965–66	5965.000	3087.110	
1966–67	1780.000	1167.977	Excluding Harur Range.
1967–68	3650	2233.627	Excluding Harur Range
1968–69	425	376.655	
1973–74	950	333.919	
1974–75	1200	1003.043	
1975–76	Nil	Nil	

(In 1967 Valasamalai coupe I was allotted to the Mill for working against the quota of 900 tonnes)

During 1975–76 the following flowered coupes in Sathanur Range were allotted to the Mill for removal of dead bamboos at Rs. 22/ per tonne.

(1)	P. Swamimalai	B.C. III	400 tonnes
(2)	Nathampalli	B.C. III	400 tonnes
(3)	Valasamalai	B.C. III	400 tonnes

190. The bamboo coupes were sold upto 1974–75 as per the prescriptions of the working Plan. There are altogether 28 bamboo series including the unreserves of Tirupathur and Chengam Ranges in this Division as detailed below :—

Sl. No.	*Name of Range and bamboo Series.*	*Area in ha.*
	Sathanur Range—	
1.	Valasamalai	3085.75
2.	Nathampalli	2101.94
3.	Swamimalai	1802.07
	Chengam Range—	
4.	Palamarathur	2053.78
5.	Pandirevu	1636.55
6.	Kallathur	1953.01
7.	Kuppanatham	904.07
8.	Tenmalai central	1770.00
9.	Tenmalai East	1872.07
10.	Nallapattu South	934.02
11.	Nallapattu North	1057.85
12.	Palamarathur unreserve	2237.91
	Tirupathur Range—	
13.	Andiappanur	3851.79
14.	Kambugudi	2732.43
15.	Thagarakuppam	4203.88
16.	Mambakkam	4399.34
17.	Puliyur	4848.13
18.	Singarapet	2243.58
19.	Puliyanur	2004.41
20.	Malaitirupathur	3138.74
21.	Nadukuppam	2653.53
	Alangayam Range—	
22.	Mangalam	2460.48
23.	Nagaluthu	3082.09
24.	Yelagiri	1991.05
25.	Alangayam	4690.30
26.	Mandarakuttai	1651.11
27.	Pungulam	4617.05
28.	Nayakkanur	1750.27

191. Under the prescriptions of Thiru. Rajasingh 's Plan felling cycle prescribed is 3 year's and 6 mature culms are to be left in each clump. Felling of bamboos to be done at a height not less than one foot and not more than 3' from ground level.

192. One continuing evil with regard to bamboo working in the Division as a whole is the scant regard paid in the observance of the felling rules by the contractors in working the coupes. The department appears to be paralysed by a sense of helplessness except for leaving fines to keep up appearances, which at best is a poor consolation for our failure to secure positive adherence to the felling rules. It will not be out of place to narrate the remarks of some of the following officers, which are as true today as it was at the time they were made. Thiru Minchin, Conservator of Forests, had summed the position as early as 1934 as follows:—Portions of the coupes are hardly touched and other portions are over worked, not to say massacred. Small punishing of contractors goes on to keep up apperances. The contractors probably allow for some fines when they take a coupe. The bamboo working in practice has little resemblance to the system on paper. I do not think that the bamboo contractors issuing permits in the coupe, is a reality". Thiru C. R. Ranganathan made the following observation during the same period. "The silvicultural principles embodied in the felling rules have conferred little or no benefit to the crop inspite of their existence in the contract conditions for nearly three decades. As a rule they were followed more in the breach than observance. Wherever the felling men of the bamboo contractors have set foot, one sees signs of frenzied exploitations". The division was no exception to these remarks and continued over exploitation and violation of felling rules by the bamboo contractors was there and the bamboo stock in the forest started depleating at alarming pace. Foreseeing the dismal state of affairs of this species, the Conservator of Forests, Salem Circle recommended the suspension of working of all bamboo coupes in the Division. On his recommendation the Chief Conservator of Forests, in his D. Dis. No. 6559/74, dated 5th January 1975 ordered the closure of all bamboo coupes for a period of six years from 1975–76 to 1981–82 by which time it is expected that the growing stock of bamboos would improve qualitatively and quantitatively.

193 C. *Exploitation of Fuel.*—In the foregoing paragraphs the manner in which timber and fuel were removed under enforcement of Jungle Conservancy Rules of 1860, has been dealt with. The felling and removal of fuel under the system had no check and timber trees on the Tenmalais were over exploited leaving nothing worth to call as timber in later years. In the early part of the century the Chengam Forests were over worked by the Portonovo company for the manufacture of charcoal at Tiruvannamalai. Even after some years after reservation of Forests, the permit system continued to be practiced. The permit system was abolished in 1891 in Tirupathur and Alangayam Ranges and working of fuel forests under coppice with standards' was put into practice. This system was later on extended to other ranges one by one. This was done to supply fuel to the Madras Railway Company and small timber to the ryots.

194. From 1901 onwards Working Plans one by one came into force. Definite areas were allotted each year for working under coppice with standards. The rotation was indefinite. Coupes were of large size extending over 500 to 700 acres without any consideration for accessibility or communication resulting in a standstill in the working often as this was done through departmental working. So from 1908 departmental working was given up in preference to contract system. But this did not help in attracting contractors in spite of relaxing the rules. Only in 1924 a revised Working Plan by Thiru Sathe was put into normal implementation. This plan covered all produce except sandal. He advocated "Simple coppice" in place of "simple coppies with standards" system to prevent the illicit felling of "Standards". The District Forest Officer was left with the choice of excluding certain seed bearers of economically valuable species, like sandal, tamarind, etc., and sapling below 9 inches in girth were not to be felled. Exploitation went according to the prescriptions generally.

195. *Thiru Brand's Plan* (1937–50).—Seven regular series and eleven reserved series were prescribed. Felling of reserve series was left to the discretion of the District Forest Officer. Rotation was fixed at 40 years. Felled coupes were closed to grazing for seven years. Coupe stones were to be planted for the first time. Between 1941 to 1948 areas outside the Working Plan prescriptions were worked for supply of fuel to Madras City and other places, In 1941 rab regeneration was given up in favour of kumri regeneration. Standing examples of good plantations during that period are found in Narasingapuram Reserved Forest Tamarind plantations.

196. *Tiru Ramakrishnan's Plan* (1950–1962).—At the time of revision there were 21 regular series and 4 reserve series prescribed for implementation (excluding Harur Range). Felling rules were same as in the previous plan, except that felled coupes were closed to grazing for a period of 3 years. No specific prescription was made for regeneration of felled coupes. But during this period large areas were tackled for regeneration under the Five-Year Plan Programme. The practice of handling all cut fuel obtained from clearing demarcated fuel coupe lines to the contractors was prescribed. Later in Chief Conservator of Forests' No. 15857/60 D-3, dated 12th July 1960 orders were issued not to collect the demarcation charges from the coupe contractors.

197. *Thiru Rajasingh's Plan* (1964–65 *to* 1974).—Simple coppice systems with reservation of sandal, tamarind, bamboos and other minor Fodest Produce yielding trees to be retained. was prescribed. Rotation was fixed at 40 years. No reserve series was allotted. There were 22 regular series excluding Harur Range. Felled coupes were closed to grazing for a peroid of fiive years. Systematic working strip by strip was prescribed. The prescriptions were generally followed with the following deviations.

Beemarapatti fuel series in Sathanur Range was dropped from working on the report of the District Forest Officer on grounds that the coupes are on steep slopes and contractors who work the coupes are likely to pilfer from the adjoining Ariyagoundar Jagir and Kottapatti Reserved Forest of Harur Range and this was approved by the Chief Conservator of Forests (District Forest Officers No. 8881/63 letter, dated 7th November 1964 and Chief Conservator of Forests No. nil, dated 26th June 1964).

Over the proposal of the District Forest Officer in his letter No. 8607/74, dated 15th October 1974 working of the fuel coupes in Chengam, Tirupathur and Alangayam Ranges was closed for the next 10 years from 1975–76 as they contain poor yield and in view of the supply of fuel from the village plantations (Farm Forestry) and from the vast areas cleared for regeneration every year (Chief Conservator of Forests orders in D. Dis. 69456/76 K-4, dated 9th December 1974).

An area of 4,000 hectares in Anandavady Reserved Forest and Melchengam Reserved Forest was handed over to the Central State Seed Farm on a 30 year lease according to G.O. Ms. No. 2788/Agriculture, dated 20th October 1971. The entire area was divided into certain bits and sold for clear felling. This had flooded the market with fuel and dropped the demand for fuel coupes in sales. In view of this all the remaining 10 fuel coupes of Sathanur Range were dropped from sale from 1975–76 as per the proposal of the District Forest Officer, Tirupathur in his C. No. 9593/75, W3, dated 20th October 1975. While accepting the proposal, the Chief Conservator of Forests under No. 90122/75, dated 8th March 1976 has ordered the working Plan Officer to examine the whole question of continuance or closure of fuel coupes while revising the plan. This is discussed in detail on the chapter for future management.

198. A new scheme for the exploitation of large accumulation of deadwood from the bamboo coupes of Chengam Range through departmental extraction and sale was proposed by the District Forest Officer, Tirupathur in his No. 18171/69 L, dated 16th July 1970 and was approved in Chief Conservator of Forests' No. R. Dis. 4523/71 K4, dated 18th March 1971. During the years 1970-71 and 1971–72 a total of 1742 tonnes of deadwood was departmentally collected at a cost of Rs. 27,915 and a revenue of Rs. 98,654 was realised by sale during the period. Under the garb of removing deadwood, large scale illicit removal of fuel and timber was noticed in certain Divisions of the circles and the Conservator of Forests, Salem Circle ordered the stoppage of further working in his No. 17159/72 L, dated 18th August 1972 and this was approved in Chief Conservator of Forests No. D. Dis. 18077/72 K4, dated 6th January 1973. Never against this scheme will be revived on any grounds

199. *A list of fuel series prescribed in Thiru. Rajasingh's Plan is furnished below :*

Range. (1)	*Name of fuel series.* (2)	*Area in ha.* (3)	*Reserve in which located.* (4)
Tirupathur	1. Singarapet	766.880	Singarapet RF.
	2. Govindapuram	744.622	Govindapuram RF.
	3. Andiappanur	664.898	Andiappanur RF.
	4. Chinnasamudram (North)	527.700	Chinnasamudram RF.
	5. Chinnasamudram (South)	587.199	Do.
Alangayam	6. Alangayam	1402.238	Alangayam RF.
	7. Mantharakuttai	1371.887	Inner Javadis and Alangayam RF.
Chengam	8. Anandavadi (East)	1619.954	Anandavadi RF.
	9. Anandavadi (West)	1326.967	Do.
	10. Melchengam	602.172	Melchengam RF.
	11. Mudanai	1529.714	Mudanai RF.
Sathanur	12. Ponniar (East)	1625.215	Ponniar RF.
	13. Ponniar (West)	936.846	Do.
	14. Sorapanandal	238.764	Do.
	15. Beemarapatti	942.111	Valasamalai and Nathampalli RF.
	16. Swamimalai	692.822	P. Swamimalai RF.
	17. Royandapuram	701.725	Royandapuram A and B.
	18. Veppur (East)	855.908	Ponniar RF.
	19. Veppur (West)	1162.256	Do.
	20. Reddiyapalayam	1338,292	Do.
	21. Chinnayampattai	613.504	Chinnavampettai RF.
	22. Ravandavadi	1712.222	Ravandavadi RF.

200. *D. Timber Extraction.*—Under Sathe's Plan, in 1924, three improvement felling series on a ten year cycle and 3 selection-*cum*-improvement felling series on a twenty year cycle were constituted for the so called timber forests. For want of proper communication and transport facility and poor quality of timber, the timber working was irregular and by 1935, these were abandoned oneby one.

E. Minor Forest Produce.

201. As early as 1860 when the Jungle Conservancy Rules were enforced a ban was imposed on the felling of trees yielding fruits. The earliest plan for minor forest produce was started in the year 1901 where it prescribed the sale of M.F.P. items, making the Range as the unit. Exploitation was through contractors agency and the leases were annual though for Avaram bark and Konnai bark, it was made triennial. The working plans that came into force after 1924 were more definite in the exploitation of M.F.P. items. Seldom, departmental exploitation was resorted to. In Thiru Rajasingh's Plan, for M.F.P. Sales, Gallnut was made a separate item of sale for each Range. All items of M.F.P. are sold annually except Konnai bark which was sold on a five year rotation.

202. Regarding green manure leaf, though removal was done from any place on permits, in Thiru Ramakrishnan's Plan, he opened separate working circle for Chengam taluk with four series of three coupes each, and tried to confine all removals to a definite coupe earmarked for the purpose in each series on a 3 year rotation. In practice this was never adhered to and removals were resorted to from all over the forests. Thiru Rajasingh's Plan prescribed the removal of green manure leaf on permit system from specified, localities and fuel forests due to be felled in the immediate future.

203. It has been ordered that in view of the Government policy to preserve the natural forests working of fuel coupes one year in advance for green manure leaf coupes separately. be stopped as communicated in Cief Conservator of Forests No. 34559/76 E3, dated 17th May 1977. So no green leaf manure working circle is prescribed in his plan.

204. The minor forest produce working circle covers all the reserves, office compounds and rest house compounds in the division. In past exploitation of all items of minor forest produce from the unreserves on the hills and the removal of tan barks and gallnuts from unrsereves, within the limit of the division were covered by the working Plans and regulated by the staff of the division. But with the enactment of the Madras Panchayat Act the administration of all the unreserves, has to vest with the panchayats and the Forest Department has been instructed to release the unreserves from its control in favour of the panchayats. Accordingly from 1961 onwards unreserves have been excluded from the minor forest produce sales of the division and panchayat presidents were conducting the sale of minor forest produce units in the unreserves of pungampattu, Nellivasal and Pudur Nadu (which came under Kambagudi and Puliyur unreserves). In 1964, the Collector of North Arcot District in his K. No. 45813/64, dated 5th October 1964 ordered that the Forest Department alone is competent to lease out the minor forest produce in the above unreserves as they are not under the jurisdiction of the Panchayat Board and ordered that the revenue derived from the sale of minor forest produce, from the above unreserves should be booked to IX Land Revenue.

But in R.C.D. 658171/74, dated 13th September 1974 of the Collector of North Arcot district, it was ordered that the Revenue officials alone should conduct the sale as the Land Revenue Administration of Tirupathur Javadis was transferred to the Revenue Department as per G.O. Ms. No. 2406, Food and Agrciulture, dated 21st August 1964 and Board's Proceedings Rt. No. 2278 (Q), dated 29th April 1974 and Board's reference No. Q1 2530/73, dated 26th April 1974 communicated in Collector's No. R. Dis. 47448/74, dated 23rd May 1974.

F. Lac cultivation.

205. Experimental cultivation of lac on Zizyphus jujuba trees was made on the Javadis near Kavalur in 1940 and later years and due to failure this was givenup.

G. Grazing.

206. Before 1892 the grazing of animals, including goats in the forest was without any restriction. On the introduction of the Forest Village system, malayalis were not permitted to possess goats and were allowed to graze other animals free in specified blocks of forests allotted to each forests village. It was in the year 1892, the closure of worked fuel coupes, to grazing for a period of 5 or 6 years was imposed. For Alangayam and Tirupathur Ranges, in the year 1902, rotational grazing on a 12 year cycle was introduced while for other areas, 1/6th of the area was

closed to grazing for a period of two years. This system was discontinued very soon due to difficulties in enforcing the conditions. Only after 1915, on introduction of the Forest Village System, Working Plans prescribed more practicable restrictions on grazing on a firm basis.

207. For along time, the grazing fees varied from Division to Division. Prior to 1926, grazing blocks forming part of a range was the unit, for the gracing permits. In 1932 the entire division was made the unit for the validity of grazing permits. In G.O. Ms. No. 836, Development, dated 29th March 1938, the grazing fees were uniformly reduced to 2 annas per sheep, 4 annas per cow and 6 annas per buffalo as a gesture of showing concessions to the ryots. This was doubled in G.O. Ms. No. 58072/DII/64-4, Food and Agriculture, dated 16th June 1964 and the rates were 25 paise per sheep, 50 paise per cow and one rupee per buffaloe. From 1st July 1971, in G.O. Ms. No. 17, Agriculture, dated 2nd January 1971 the rates were further doubled as follows: Re. 1 per cow, Re. 0.50 per sheep, Rs. 2 per Ass and Buffalo and Rs. 20 per Elephant. These rates are uniformly followed, for the entire State at present. Under Thiru Rajasingh's Working Plan, free removal of grass in headloads is to be allowed for bonafide domestic use and for removal by cart loads, a prescribed fee is levied. The rates for removal of grass is as follows:

From 1960–71 Re. 0.05 per head load and Re. 1 per cart load.

From 1971 onwards for head load Re. 0.10 and Rs. 2 per cart load.

208. Penning facilities have always been provided in the Reserved Forests of the division though they are occasionally only, taken advantage of. Details of pens in the various ranges and the penning licenses issued are already furnished. Free cutting and removal of fodder grass has been permitted as per G.O. Ms. No. 227, Development, dated 29th January 1938.

209. *II. Fire protection.*—There has been no methodical operation for fire protection before the introduction of working plans except in fuel coupes to protect the coppice regrowth from fire damage. In the early working plans, "introduction of organised patrols" to spot out fires and put them out was made with no recorded efficiency of this system. In Thiru Sathe's Plan, fire tracing of inter division boundary near Alangayam and Chengam, and some paths to a length of 15 miles was prescribed. This was done for some years and then given up.

210. *Fire reward system.*—There is no record to show as to when exactly this system was introduced. It would be wrong to presume that this system was introduced as on appendix to the forest village system. Under this system forests were divided into convenient blocks and each block was allotted to a set of specified villages nearly, permanently for protection against fire. In Thiru Rajasingh's Plan the rate of reward of Re. 1 for every hundred acres protected was enhanced to Rs. 2 per hundred acres, and he also fixed Rs. 4 per hundred acres burnt as fine to be deducted from the reward at the time of payment. To asses the extent of fire, the areas are to be gone over in June or later every year and reward list prepared. List of villages and the jurisdiction of the village in the forest for fire protection is given in Appendix XVIII.

The rewards, fixed and fines imposed to the hill villages is furnished in appendix XIX.

Thiru Rajasingh provided the following fire protection measures in his Plan:—

(1) Indirect measure, involving no expenditure to prevent the temptation to burn the forests wilfully, by punishing the offenders with prosecutions, closure of repeatedly burnt areas to grazing, etc.

(2) Fire fighting measures to extinguish or localise the fires after they have broken out.

(3) Direct or precautionary measures, by removing inflamable materials from definite places in the forests. Fire protection through co-operation of the villagers who depend on the forests for thier well being and giving them an incentive through payment of fire rewards.

211. Fires have been an annual feature, particularly in the outer slopes of the Javadis and Yelagiris. Large areas are burnt annually causing notable openings in the forests and wiping out of young regeneration of sandal. Fire burnt areas are immediately colonised by Lantana, Acacia intsia, etc., in turn forms a fresh source for occurrence more and fires: Though the fires are only ground fires moshy, the damage caused by it is colossal. In practice no serious effort is taken by the staff to organise for the extinction of the fire the moment they are spotted out. Fires get extinguished of their own accord on reaching the borders of natural barriers like roads, streams ridges, etc. Details of recorded occurrence of fires in various Reserved Forests of the Division are furnished in Appendix XI, though this may not reflect the true picture of all the fires occurred in the forest, as many fires go unreported by the subordinates. A fire map, posting the annual fires, is maintained in the District Forest Office.

212. *I Plantations.*—In the early working Plan restocking of timber and fuel coupes with principal species either by broadcast sowing or sowing in ploughed furrows 2 feet apart was advocated though there is no record to show the officacy of these methods. In 1931–32 Rab sowings in the ash of burnt heaps was done on a limited scale. Experimental clearfelling, followed by burning and dibbling in patches at an espacement of 9 feet by 9 feet over five acres of the first two coupes of Kottur improvement series was prescribed but was subsequently cancelled by the then Chief Conservator of Forests in 1926. Thiru Brand in his plan prescribed, "Rab" sowings in patches in felled coupes and this was given up as per orders of the Chief Conservator of Forests in his Miscellaneous No. 31, dated 17th January 1941 and instead Kumri regeneration was undertaken from 1940–1941 onwards, in Andiappanur Reserved Forest, Narasingapuram Reserved Forest, Mudanai Reserved Forest and Ponniar Reserved Forest. Today we can see good Tamarind topes of limited extent in Narasingapuram Reserved Forest, Mudanai Reserved Forest and Ponniar Reserved Forest. There is a patch of about 1 to 2 acres of good Hardwickia binata trees presumably raised under rab regeneration method in Chinnasamudram Reserved Forest about 40 years back. The location of these are marked in the plantation maps prepared now.

213. *Thiru Ramakrishnan's Plan* (1949-1965).—Prescribes the raising of avenue trees of Tamarind along portions of roads inside Reserved Forest limits. Two year old pot plants to be raised and planted at 50 feet interval. Fencing of plants and limited watering were prescribed. He suggested the palnting of the pot plant, naked, after puddling the soil in the pits. The extent of the success is not known. Fuel regeneration by Kumri method in Narasingapuram and Sorapanandal Reserved Forests, was also prescribed. In Palamarathur Reserved Forest of Chengam Range, he prescribed Vannankuttai soft wood series at the rate of 5 acres a year. Ailanthus excelsa, Melia dubia and Bombax malabaricum were to be raised by entire transplanting.

214. During this period, from 1950. onwards number of expanchayat forests were transferred back to the forest department in a degraded condition. As these forests were not covered by the prescriptions of the working Plans, it necessitated the drawing up of a rehabilitation scheme to restore them to normal forests for sustained economic exploitation. Under sanction of the Chief Conservator of Forests in his No. 207, dated 30th July 1958, Thiru E. S. Thangam drew up a rehabilitation scheme covering the period from 1957-58 to 1966-67.

215. The scheme classified these forest areas under three categories depending upon the nature of growth on them.

Category A.—Areas containing adequate stocking of valuable species which are saleable. They have to be worked as fuel coupes and regenerated by coppice.

Category B.—Areas containing adequate stocking of valuable species which are not sale able. Immature growth have to be tended and allowed to grow to full maturity. Blanks containing poor stocking of valuable species over 10 hectares in extent have to be artificially regenerated.

Category C.—Areas containing inadequate stocking of valuable species whether salable or not and areas not covered under A and B, to be artificially regenerated.

216. The techniques adopted for artificial regenration were (1) Kumri method, (2) Saucer method, (3) Sunken mound method and (4) Trench and mound method. Container plants, either pot plots or polythene container plants are to be planted. Large scale afforestation programmes were launched from 1953 onwards. All these operations merged with the Second Five-year Plan works. Various fuel species including Eucaliptus hybrid were planted. The techniques varied in planting in two feet wide cleared strips to six feet cleared strips at intervals 22 feet apart to 33 feet apart from centre to centre. In general the outcome of these works was disappointing and it is hard to find any successful plantation now. The reasons for this poor performance can be traced to nonremoval of original growth completely, resulting in severe competition to the planted seedlings, lanck of proper protection from browsing animals, lack of after care after two or three years of raising and above all selection of unweildy areas resulting in improper supervision control and untimely planting.

217. In 1962, at the Conservator's conference a decision was taken that future regeneration technique should be an intensive one conforming to the Kumri method and Chief Conservator of Forests in his No. C.C.P. Msc. 865/62, dated 26th September—wanted that plantations should be raised only under the intensive technique.

218. *Sandal plantations.*—Before Raja Singh's Plan no systematic attempt was made to regenerate this species. In his plan three propogation regions in Tirupathur, Alangayam and Chengam ranges at Nellivasall, Vasanthapuram and puliyur respectively were prescribed at 75 acres in all three centres, annually. The prescriptions were to cut 4 feet wide strips, 33 feet apart, and at 22 feet intervals in strips, slightly to a side of 3 feet by 3 feet square patche to be cleared and sowing of seeds to be done. The object was to make these patches as propogation centres for the spread of sandal alround in later years. The prescriptions were followed up to 1965-66 and later slightly modified to plant container plants of sandal in one foot cube pits instead of sowing. Brush wood fencing around the plot was done This method was given up after 1970 and no planting was done till 1973. In 1973 an area of one acre was taken in Mandarakuttai area in Inner Javadi Reserved Forest, and 250 sandal seedilings were planted out after clearfelling, uprootal and burning. In 1974 4 hactare was planter with candal adjoining the above area. From 1972 onwards sandal tending plots are being taken in Vasanthapuram, Nallapattu, Palamarathur, Mottur, Govindapuram, Andiappanur and Mambakkam Reserved Forests. Under this operation, freeing of trees from climbers and lateral suppression was done to all sandal trees over 15 cm. girth. Inducement of root suckers by trenching around selected trees was done just at the beginining of rains 6 to 100 root suckers are seen springing from the outer edge of the trenches from roots of 2 to 3 mm. diameter. A list of sandal plantations so far raised and tending carried over to sandal in sandal tending plots is furnihesd in Appendix XX.

219. *Eucalyptus Plantations.*——From the year 1954, planting of Eucalyptus tereticornis, Nandi hills prevenance, then called Eucalyptus hybrid of Mysore origin, was tried on smaller scale in all the ranges of the division, either as a pure crop or as one of the many species planted in afforestation schemes. In 1962 a 'Project for fuel plantations for supply to Madras city was prepared by Thiru K. Durairaj covering Chingleput, Cuddalore North, Cuddalore South, Vellore East and Vellore west (Tirupathur) Divisions. The principal species advocated was Eucalyptus hybrid. All forest areas that remained unplanted and which contained good soil were brought within the purview of the project. Then a tentative rotation of 10 years was fixed, with espacement varying from 2m X 2m to 3m X 3m. Thiru Rajasingh for the first time prescribed an Eucalyptus working circle in his plan covering an area of 3,898 acres distributed in 9 series, excluding Tiruvannamalai Range which was then in Cuddalore North Division. Thiru K. R. Venkatesan in his plan for Cuddalore North Division, prescribed the planting of Eucalyptus hybrid over an area of 1,169 acres in Sorakolathur and Thipakadu Reserved Forests of Tiruvannamalai Range. Planting of Eucalyptus ciitrodora in the Yelagiris was done with good success under kumri method. Many of the plantations raised in the division have been felled by coppice method and are passing through the second felling cycle through coppice regrowth. In Chief Conservator of Forests reference No. 17466/73 L1, dated 25th August 1973 a rotation of 8 years has been fixed for Eucalyptus hybrid. Details of Eucalyptus plantations raised, localities raised, cost of raising, plantations felled for coppice regeneration, revenue obtained at the sale, etc., are furnished in Chapter II of Part II.

220. From the statement it is clear that the condition of plantations and the rate of growth vary with the different localities and from plantation to plantation even in one locality. The concep tthat this species has a great adoptibility to variety of climates and soils cannot be totally acceptable. In localitities where soil is deep and rainfall is favourable the growth is good. Particularly on stream beds, with well drained soil, the growth is excellent. Despite the fairly good stocking achieved in some of the plantations, the species cannit be deemed to have faired well in many reserved forests of the division. Even in well stocked plantations stagnation sets in after an initial spurt in the height growth in the first two or three years and plants do not produce any appreciable girth increment, though. Therefore the primary cause for poor results achieved appears to be the unsuitability of the area for raising the species consisting mostly of shallow and stony soils. Plantations raised unedr Kumri method have done far better. In view of the poor results the Chief Conservator of Forests has in his No. D. Dis. 21017/68 D1, dated 17th August 1969 ordered the discontinuance of planting Eucalyptus hybrid. But some plantations were raised even after this, in localities, where the past results are satisfactory and to fullfil the plan targets under quick growing species. Plantations raised in Jolarpet Reserved Forests, Govindapuram Reserved Forest, Singarapet Reserved Fofest, Poomalai Reserved Forest and Alangayam Reserved Forests art generally good.

221. *Farm Forstry Plantations.*—This is plan scheme under Community Development Projert aimed at the creation of village forests in the village common lands in order to meet the agricultural, domestic and past oral needs of rural community in respect of forest produce and to reduce the pressure on the reserved forests which are already in a state of degradation.This scheme came into operation from the year 1961-62 and has gained momentum to a considerable degree.A special division for the Reconnaissance Survey of Eroded lands was started in 1956 to assess the Government lands available outside the reserved forests in the state for planting purposes and was wound up in 1966. The areas for farm forestry are being selected on the basis of the village and taluk reports prepared by this division. Since most of the areas so far selected are primarily lake beds, getting submerged for short periods in the year, Babul has been the main species advocated for planting. In the foreshores of the lakes other miscellaneous species including Eucalyptus hybrid have been planted with fare amount of success.

222. Consequent to the enactment of the Madras Panchayat Act of 1958, most of the areas taken up for planting comes under the control of the Panchayats concerned and it has been obligatory on the part of the department to obtain the Panchayat concurrence before taking up the areas for planting. Initially much difficulty was experienced to obtain the concurrence. Oflate this scheme is popular in view of the Government Orders in Miscellaneous No. 117, Agriculture, dated 12th January 1971 and in G.O. Rt. No. 544 Finance (B.G.) Department, dated 2nd May 1972 to pay half the proceeds of sale of the plantations to the panchayat revenue. There has been a keen demand from the panchayats to take up areas lying in their jurisdiction first to implement the scheme in view of the advantages they get because of the above Government Orders.

223. A rotation of ten years is followed and based on this many plantations have been sold during the plan period. One redeeming feature about these plantations is the capacity of the species to coppice regrowth if coppiced by saw during the proper season of the year. Details regarding the year of raising, cost of raising, year of felling, revenue realised, etc., are furnished in Appendix XXI A and XXI B.

224. *Tamarind Plantations.*—Small scale plantations of Tamarind are raised during the last plan period in Pinjur ' B ' Block, Ponniar Reserved Forest (Sorapanandal) Sorakolathur Reserved Forest and Kannamadai Reserved Forest etc. There are certain old plantations of Tamarind in, Narasingapuram Reserved Forest, Ponniar Reserved Forest and Mudanai Reserved Forest raised under Kumri method during the years 1941 and 1942. Some of the plantations as those in Pinjur ' B ' block exhibit a poor show for want of protection and aftercare though the stocking is there. The plants are repeatedly browsed and have no chance to grow for want of protection. Some plantations in Ponniar Reserved Forest (Sorapanandal) and Kannamadai are more successful. The espacement prescribed in the Working Plan is 22 feet by 22 feet and as this was considered too. wide, it has been reduced to 11 feet by 11 feet. List of Tamarind plantations raised in this division with their cost of raising, area and locations, etc. is furnished in Appendix XXII.

225. *River canal fringe plantations.*—A small beginning to plant up along the Sathanur canal bank was made in 1972 by planting 4.5 KM. length in Sathanur Range. In the year 1975 as per orders of the District Forest Officer in his No. 4509/74, dated 27th March 1975, this plantations was handed over to the P.W.D. Again in 1976 a length of 6 KM. along Vanapuram left bank canal was taken and planted with no success. There is ample scope to take further areas under this scheme in future, to cover up the entire canal length.

226. *Avenue plantations.*—Plantations under this scheme were raised both by the territorial division and Extension forestry division along the following roads.

(1) Pachal to Nathavadi 9.2 K.M. Extension Farm Forestry Division.

(2) Kanchi Agaram 6 KM. Extension Farm Forestry Division.

(3) Anmapalayam to Pudupalayam 10 KM. Tirupathur Division.

(4) Viraiyur to Tholovakulam 10 KM. Tirupathur division.

Species raised are Delonix regia, Peltophorum ferrugenium Tamarindus indica, Pongemia glabra. Azadiracta indica Ficus hengalansis, Cassiasiamea, etc.

A list of plantations with year of raising, cost of raising area and locations, other than Eucalyptus, Farm forestry sandal and Tamarind plantations is furnished in Appendix XXIII.

227. *Teak plantations.*—Teak plantations were raised in the Division from 1940 onwards to 1969. Many of the plantations are non-existing now. due to failures. The plantations that exist now are as follows:—

1940 and 1941 Near Melpet in Tenmalai Reserved Forest.

1959, 1969 in Palamarathur Reserved Forest and Kootathur.

The trees in these plantations are crooked, borer attacked and stunted, presumably due to repeated fires and lack of tending. The further planting of this species is discontinued. There are few good old trees in the rest house compounds of Kootathur and Melpet.

SECTION 3.

SPECIAL WORKS OF IMPROVEMENT UNDERTAKEN.

228. *Welfare of the Malayalis.*—From the very beginning, the welfare of the Malayalis living on the hill villages has received the due attention by the Forest Department. They are provided the necessary grazing facilities, employment through departmental extraction of sandalwood, necessary accommodation by constructing tiled house from the funds of the Harijan Wlefare Department, well facilities in each village and above all educational facility upto 8th standard with well qualified teachers. School buildings have been constructed with the funds from the Harijan Welfare Department. Even during 1976–77 new school buildings are constructed at Kalyanamandai, Nellivasal, Pudur and Tagarakuppam. The school children are also allotted by the Collector of North Arcot district for the purpose. Details of schools run by the Forest department in the division are furnished in Appendix XXIV.

229. *Roads.*—The division has a good network of roads in addition to the cart and lorry tracks formed by the fuel and bamboo coupe contractors from time to time. The Forest Engineering division has completed the formation of the Paramanandal–Melpet road covering over a length of 13 kilometres. The road required proper maintenance to be road worthy. Many of the Forest roads are maintained through gang mazdoor system. Private buses and lorries frequently run between Alangayam and Jamnamarathur (via) Kavaloor. Details of forest roads maintained by the Forest Department is furnished in Appendix XXV.

230. *Buildings.*—There are number of buildings in the form of residential quarters for the staff, Sest houses, office buildings, and godowns in this division. During the last Plan number of buildings have been constructed to provide quarters for the staff in almost all the ranges and a dozen of them have been constructed inside the District Foret Officer's bungalow compound. The District Forest Officer's bungalow continues to be maintained by the Public Works Department. An over head tank has been constructed inside the compound by the Forest Department for supply of water to all the quarters inside the compound. List of buildings maintained by the division and list of buildings dismantled during the period of the last Plan are furnished in Appendix No. XXVI. A and in Appendix No. XXVI B respectively.

231. *Wildlife Conservation.*—Though there is fairly a good representation of species amongst the wildlife met within the Division, they are few in number and one should indeed to lucky to come across one during his wanderings in the jungle. The Malayalis on the hills used to possess number of unlicensed weapons and illicit poaching by them went on undetected for long. In a recent round up, the police have seized hundreds of such weapons from these hill villages. The Malayalis have a taboo for bison meat and this was saved the masscre of the few bisons that are found in the Javadi hills. There are no elephants in the division. The division has never been popular with poachers from the plains.

232. Till 1968 the following reserved forests were closed to shooting: Singarapet Reserved Forest, Singarapet extension Reserved Forest. Mambakkam Reserved Forest, Mambakkam Extension Reserved Forest, Govindapuram Reserved Forest, Inner Javadi Reserved Forest (part) and Ponniar Reserved Forest. In G.O. Ms. No. 101, Forests and Fisheries Department, dated 10th November 1975 under powers conferred by sub-section (1) section 37 of the Wildlife (Protection), Act 1972 (Central Act 52 of 1972) the following areas are closed to hunting for period of five yars.

Name of Reserved Forest. (1)	*Range.* (2)
Singarapet Reserved Forest	Tirupathur Range
Singarapet Extension Reserved Forest.	
Mamabkkam Reserved Forest.	
Mambakkam Extension Reserved Forest.	

Name of reserved forest. (1)	*Range.* (2)
Govindapuram Reserved Forest.	Tirupathur Range.
Inner Javadi Reserved Forest.	
Ponniar Reserved Forest	Sathanur Range.
Pungulam Reserved Forest.	Alangayam Range.
Inner Javadi Reserved Forest. (Part).	
Alangayam Reserved Forest.	
Vellalakuttai and its Extension Reserved Forest.	
Mangalam and its Extension Reserved Forest.	
Nagaluthu Reserved Forest.	
Nagaluthu Extension Reserved Forest.	
Jolarpet Reserved Forest.	
Mudanai Reserved Forest.	Chengam Range.
Damarakadu Reserved Forest.	
Paramanandal Reserved Forest.	
Nallapattu Reserved Forest.	
Tenmalai Reserved Forest.	
Palamrathur Reserved Forest.	

There are no game license holders in this Division at present.

233. *Miscellaneous.*—The unreserves of Kambugudi, Puliyur and Palamarathur have been brought under the perview of the Madras Hill station preservation of Trees Act in G.O. No. 1671, Agriculture, dated 30th September 1969. But the District Forest Officer has not been empowered to book offences under section 9 of the above act for want of delegation of powers. The matter has been referred to the Government in North Arcot District Collector's K. Dis. 78822/70, dated 26th November 1970, seeking orders of the Government to delegate powers (Chief Conservator of Forests' No. 17040/70 H3, dated 19th January 1971).

234. *Nature Reserves.*—In order to preserve representative areas of natural forest types for scientific and aesthetic purposes, the Chief Conservator of Forests in his No. R. Dis. 19032/73 K3, dated 13th March 1975 ordered the demarcation of a block of 3329.08 hectares in Andiappanur Reserved Forest (Kambugudi) of Tirupathur Division. In persuance of these orders an area of 730 hectares has been demarcated in Andiappanur Reserved Forest and maintained as a 'Nature Reserve'.

SECTION 4.

PAST YIELD.

235. *Sandal.*—Detailed statement of yield from the extraction of sandal from different coupes in the various series from the years 1960–61 to 1974–75 is furnished in Appendix XXVII.

236. *Bamboos.*—Statement showing the revenue and yield obtained for the Bamboo coupes for the year 1960-61 to 1974-75 is furnished in Appendix XXVIII.

237. *Fuel.*—Statement of total yield, rate per hectare obtained from sale of each coupe and areas worked for the years 1961–62 to 1975–76 is furnished in Appendix XXIX.

238. *Minor Forest Produce.*—Detailed statement of annual yield from different items of M.F.P. from 1960–61 to 1975–76 is furnished in Appendix XXX.

239. Statement of revenue realised by sale of different M.F.P. Units from 1961–62 to 1975–76 is furnished in Appendix XXXI.

SECTION 5.

PAST REVENUE AND EXPENDITURE.

240. Statement of Revenue realised under different heads of account in the division for the years 1961–62 to 1975–76 is furnished in Appendix XXXII.

241. Statement showing the abstract of Revenue and Expenditure for the years 1961–62 to 1975–76 for the division is furnished in Appendix XXXIII.

CHAPTER VI.

STATISTICS OF GROWTH AND YIELD.

Section 1: Sandal Enumeration—Mambakkam Sandal Series.

242. After Thiru C. C. Wilson and Thiru Brand's enumeration of sandal area, Thiru Rajasingh revising the Plan, took up sandal enumeration for three coupes, viz., Vasanthapuram coupe, I, Mottur coupe II and Melpet coupe III in 1962–63.

243. As decided at the meeting of the sandal study group at Kyalur on 21st August 1974, the Chief Conservator of Forests ordered the working Plan Division to take up proper estimate of growing stock and stock mapping of sandal while revising the Plan for sandal divisions. With limited time staff, and funds it is practically impossible to take up the work of such magnitude in the entire sandal bearing areas of Tirupathur Division. On instructions from the Conservator of Forests, Working Plan and Research, one complete series Mambakkam Sandal series and SC II of Mottur series were taken up for stratified systematic strip enumeration to cover about 20 per cent of the total area. A double sampling technique to cover about 10 per cent of the strips actually enumerated is adopted for assessing the distribution of girth classes. Statistics arrived at from the enumeration data are given below and **discussed.**

244. A sandal stock map also was prepared **based on the** following density classes.

Profuse—Over 100 trees per hectare.

Dense—51–100 trees per hectare.

Frequent—26–50 trees per hectare.

Scattered—13–25 trees per hectare.

Sparse—5–12 trees per hectare.

Isolated—Less than 5 trees per hectare.

245. *Area under different density classes*

Name of coupe-	*Area in hectare.* *Dense 51 trees and above per hectare.*	*Frequent 13 to 50 trees per hectare.*	*Sparse 12 tress & less per ha.*	*Total sandal area.*	*Total non sandal area.*	*Total area in ha.*	**Remark.**
Mambakkam SC I	20	117	417	554	172	726	
C II	16	111	336	463	41	504	
SC III	2	38	223	263	404	667	
Total for series	38	266	976	1280	617	1897	

From a comparison of the stock map of Thiru. Brand and that prepared now it is seen that there is a overall decrease in sandal territorry and deterioration in sandal density over a period of 39 years.

Distribution of girth classes.

246. The following is the estimated distribution of all girth class as derive by the application of ratio obtained from double sampling to the total of 20% enumeration and amplified to 100% for the entire Mambakkam series, coupe war.

Sandal coupe No.	*Sandal area in hp.*	*Saplings. (0.15)*	*Girth Class in cm.* 16–30	31–45	46–60	61–75	76–90	91–105	*Total.*	*Density per ha.*
SC I	726	2410	1380	975	935	315	105	..	6120	8.43
SC II	504	2150	1265	820	900	640	90	95	5960	11.83
SC III	667	840	230	230	170	..	..	295	1765	2.65
Grand total	1897	5400	2875	2025	2005	955	195	390	1384	7.30

247. As per the enumeration done by Thiru. A. R. Brand the average number of sandal trees per hectare for whole division was 42.5 (17.2/ha.) The present enumeration though done for Mambakkam sandal series alone works out to 7.30 trees per ha. There is a marked decrease in the density. This can well be attributed to the virulence of spike in the past decades and the repeated fires which most parts of this series experience. The established regeneration (Sapling above 2m in height and below 15 cm. in girth) is only 5400 for 1897 hec. Which works out to 2.8 per hectare. This is very poor for a sandal area.

248. *Distribution of spiked.*—From the enumeration figure the percentage of spiked trees to the living trees in each coupe of the series is as follows.—

SC I 0.65%
SC II 2·76%
SC III 4.25%

Average for the entire series is 2.55%

249. *Annual mortality* :—The percentage of annual mortality over the total number of living trees is :—

SC I 3.51%
SC II 1.68%
SC III 1267%

The girth war distribution of spiked trees is as follows :—

Mambakkam coupe No.	*saplings below 15 cm.*	*16–30 cm.*	*31–45 cm.*	*46–60 cm.*	*61–75 cm.*	*76–90 cm.*	*Grand Total.*
SC I	3	2	3	..	..	..	8
SC II	5	5	8	7	7	1	33
SC III	3	2	3	..	..	..	8

250. *Incidence of spike*.—Incidence of spike in various girth classes for 1000 trees enumerated in that girth class is as follows :—

Coupe No.	*Density of sandal per ha.*	*Saplings below 15 cm.*	*16–30 cm.*	*31–45 cm.*	*46–60 cm.*	*61–75 cm.*	*76–90 cm.*	*Overall incidence.*
SC I	8.43	6.22	7.25	15.38	..	..	..	0.5
SC II	11.83	11.63	19.86	48.78	38.89	54.69	55.56	27.6
SC III	2.65	10.19	29.39	32.10	17.31	36.65	25.64	42.5

From the above statement it is clear that the incidence of spike is more in the higher girth classes.

251. *Dead sandal* :—The enclosed table gives the details of dead sandal trees actually enumerated in 20% sampling. The distribution of dead trees and their concentration is marked in the map to facilitate location, enumeration and extraction by the Division staff.

Coupe No. and Area.	*Saplings 0 to 15 cm.*	*16 to 30 cm.*	*31 to 45 cm.*	*46 to 60 cm.*	*61 to 75 cm.*	*76 to 90 cm.*	*91 to 105 cm.*	*106 to 120 cm.*	*121 to 135 cm.*	*136 to 150 cm.*
SC I (726 ha)	5	143	160	76	37	16	7	1	2	..
SC II (504 ha)	33	348	209	107	48	7	8	760	..	..
SC III (667 ha)	16	214	214	130	64	24	16	1	1	1

At the time when Thiru. Brand enumerated the dead trees in 1937—38 there were 63837 dead and dying trees over area of 20520 ha. (50705 ac.) for the whole sandal series which works out to 2.62 trees per hectare. The present distribution of dead tress for Mambakkam sandal series works out to as follows based on the 20% enumeration amplified to 100%.

SC I 447/726 = 0.615 per hectare
SC II 760/504 = 1.50 Do.
SC III 681/667 = 1.02 Do.

Average for the entire series works out to 1.045 dead trees per hectare. This indicates that number of dead trees available is fastly deterioration.

252. Estimated yield from dead trees enumerated in SC I, II, and III of Mambakkam sandal series as determined from 20% enumeration and amplified to 100% is as follows :—

Name of coupe	*SC I*		*SC II*		*SC III*		*Total*		
Girth class in cm.	*Yield for trees as calculated from working of Sc II in 1974–75 in kgs.*	*No. of trees.*	*Yield in kgs.*	*No. of trees.*	*Yield in kgs.*	*No. of trees.*	*Yield in kg.*	*No. of trees.*	*Yield in kg*
0—15	5·0	5	25.0	33	165.0	16	80.0	54	270.0
16—30	9.2	143	1315.6	348	3201.6	214	1968.8	705	6436.0
31—45	19.3	160	3088.0	209	4033.7	214	4130.2	583	11251.9
46—60	41.6	76	3161.6	107	4451.2	130	5408.0	313	13020.8
61—75	100.5	37	3718.5	48	4824.0	64	6432.0	149	14974.1
76—90	167.8	16	2684.8	7	1174.6	24	4027.2	47	7386.6
91–105	322.0	7	2554.0	8	2576.0	16	5251.0	31	10081.0
106–120	397.2	1	397.2	..	..	1	397.2	2	794.4
121–135	460.2	2	920.4	..	..	1	460.2	3	1330.6
136–150	520.4	..	..	..	..	..	..	1	520.4
20% Total		447	17565.1	760	20426.1	681	28675.0	1888	666666·2
100% Total		2,235	8,78,825.5	3,800	1,02,130.5	3,405	1,43,375	9,440	3,33,331 (33 ton)

253. *Mortality Rate.*—Based on the experience, and inspection of patta and reserved dead sandal trees left unextracted for known number of years and also taking advantage of the experience of the hill tribes who live in sandal tracts from the time they are born, an attempt was made to assess the age of the trees from the time they are dead. The following norms are adopted for assessing the age generally :—

Less than one Year.	(1) Bark is in tact more or less. (2) Branches and twigs of finger size and thinner are also present on tree. (3) There is not much white ant attack or decay of sapwood.
Over one Year But less than 3 Years.	(1) Barks falls of for major portions of trees except in small patches. (2) Twigs and small branches up to wrist size decay and fall of. (3) Close to ground there is visible sign of decay and white ant attack of sapwood.

By about the third year smaller trees fall to ground. When in contact with the ground, decay goes on to the full length with accelerated speed. There will be only skeleton of heartwood as years are more after death.

Mostly it is easy to ascertain the age of mortality of dead trees with in one year of death and this figure is more important for the present analysis to assess annual mortality.

254. *Annual mortality.*—The following estatement gives the estimated number of dead trees, the age of mortality from the time they were dead and the anticipated yield.

SC.No.	*One year or less.*	*Two years and over one year.*	*Three years and over 2 years.*	*Over 3 years.*	*Total No. of dead trees.*	*Anticipated yield in tonnes.*
SC I	215	50	470	1,500	2,235	87·8
SC II	1,005	320	435	2,040	3,800	102·1
SC III	220	40	150	2,995	3,405	143.4
Total..	1,440	410	1,055	6,535	9,440	333.3

255. *Yield based on annual mortality.*—Column one of the above table can also be taken as the annual yield by physical rotation. Since the coupes are worked by triennial rotation, the yield of sandalwood for each coupe is estimated as follows—

Coupe No.	*Annual mortality.*	*Triennial yield No· of trees (col. 2x3).*	*Estimated yield in tonnes.*
SC I	215	645	25.3
SC II	1,005	3,015	81.0
SC III	220	660	27.8
Total for series.	1,440	4,320	134·1
Average annual yield for series.	1,440	——	44·7

In the triennial rotation following is the actual yield obtained during the past 11 years for the above coupes.

Name of coupe.	*Coupe I.*		*Coupe II.*		*Coupe III.*	
Year of extraction.	*No. of trees.*	*Heartwood in Kgs.*	*No. of trees.*	*Heartwood in Kgs.*	*No of trees.*	*Heartwood in Kgs.*
1964–65	204	17,865	..	..	..	..
1965–66	..	..	219	28,304	..	..
1966–67	..	..	..	..	123	20,909
1967–68	.. Not worked	..	..	..	..	..
1968–69			.. Not worked	..		
1969–70					.. Not worked	
1970–71	936	85,714	..	..	..	..
1971–72	..	..	1,091	77,398	..	..
1972–73	..	..	..	..	1,056	81,275
1973–74	1,031	63,398	..	..	..	..
1974–75	..	..	874	32,584	..	..
Total ..	2,171	1,66,977	2,184	1,38,286	1,179	10,2184
Annual average yield	724	55,699	728	46,095	589	51,092

The potential yield appears to be substantially far less than the actual yield in SC I and SC III as indicated above.

The annual mortality in the live trees is found to be 3.39% in SC I, 14.42% in SC II and 11.08% in SC III and for the series it is 9.42%

Growing stock and its value.

256. An estimate of the capital value of the growing stock is made on the basis of the above figures. Hartwood yield for each girth class as obtained for Mambakkam SC II Extracted during 1974-75 (average for number of trees) is applied here. However to allow for thickness of brak, the yield figure of one lower girth class is applied on the green trees.

Crowing stock and estimated yield.

Nome of coupe.		*SC I.*		*SC II.*		*SC III.*		*Total.*	
Girth class in cm.	*Yield per tree in Kgs.*	*No. of trees.*	*Yield in Kg.*	*No. of trees.*	*Yield in Kg.*	*No. of trees.*	*Yield in Kg.*	*No. of trees.*	*Yield in Kg.*
0–15	..	482	..	430	..	668	..	1,080	..
16–30	5.0	276	1,380.0	253	1,265.0	46	230.0	575	2,875.0
31–45	9.2	195	1,794.0	164	1,508.8	46	423.2	405	3,726.0
46–60	19.3	187	3,609.1	180	3,474.0	34	656.2	401	7,739.3
61–75	41.6	63	2,620.8	128	5,324.8	..	..	191	7,945.6
76–90	100·5	21	110.5	18	1,809.0	..	..	39	3,919.5
91–105	167.8	..	..	19	3,188.2	59	9,900.2	78	13,088.4
Total for 20% Enumeration	..	1,224	11,514.4	1192	16,569.8	353	11,209.6	2,769	39,293.8
Estimated for Total 100 %		6,120	52,572.0	5960	82,849.0	1,765	54,048	13,845	1,96,469 or 196 tonne.

The total growing stock for the series is 196 tonnes.

257. *Sourcess of error.*—Utmost care is taken for the accuracy of the field data, both in the lay out of the strip lines and in the enuemeration of trees. Yet, in a vast and difficult work like this, st is inevitable that some errors are likely to crop in like the missing of some saplings and trees in the striplines due to the presence of impenetrable mass of lantana reaching a height of eight to 10 feet. It is likely, because of this same trees, which are lying in the bushes, might have been missed by the staff and mazdoors. Such efforts are negligible and might not be more than 5 to 10 per cent at the most. A small percentage of trees of small girth nasses might also have been missed. However, sine density is marked by classes with fairly wide margins it should not effect the stock maps materially.

Projection of results to other areas.

258. There is considerable variation in the condition of growing stock and other particulars in between stratified limits of mC I, SC II and SC III. Such a lack of uniformity suggests that this work should be applied with caution when projected beyond the territory:

Sandal enumeration–Mottur–SC II.

259. Thiru Rajasingh, while revising the plan of the Division 1962–63 completely enumerated sandal in the following three coupes, viz, Vasanthapuram coupe I, Mottur coupe II and Melpet, coupe III. To compare and study the difference, Mottur coupe II was again taken up in 1976–77 for systamatic stratified strip enumeration to cover about 20% of the total area of the coupe and a double sampling technique was done to cover about 10% of the strips actually enumerated.

260. The distribution and density of sandal in SC II of Mottur series is as follows:—

Dense (above 50 trees per ha.)	Nil
Frequent (12 to 50 trees per ha.)	Nil
Sparse (less than 12)	34 hectares.
Total sandal area ..	34 hectares.
Non sandal area	78 hectares.
Total area of the coupe	112 hectares.

261. The detailed abstract of 20% enumeration is as follows:—

Mottur SC II-Area 112.1 hectares.

								Abstract of dead trees.					
Details of trees. (1)	*Total No. of tress including saplings.* (2)	*Saplings 0 to 15 Cm.* (3)	*16 to 30 Cm.* (4)	*31 to 45 Cm.* (5)	*46 to 60 Cm.* (6)	*61 to 75 Cm.* (7)	*76 to 90 Cm.* (8)	*Total trees.* (9)	*1 Year old.* (10)	*2 Years old.* (11)	*3 Years old.* (12)	*Over 3 Years old.* (13)	*Total.* (14)
Healthy	9	9	..	..	1	..	1	2	..	..	..	..	..
Spiked	..	..	..	..	..	..	..	..	..	..	..	..	..
Dead	..	..	32	41	25	13	2	114	4	3	..	107	114
Stumps	..	..	7	5	1	.	..	13	..	..	..	13	13

262. From the above, anticipated yield of dead trees was calculated based on the average yield obtained from the extraction of dead trees of the same coupe in the previous extraction for the different girth classes and is tabulated below :—

Girth Class.	No. of dead trees.	Average yield per tree in kg.	Total yield in Kg.
0–15	—	—	—
16–30	32	12–50	400·0
31–45	41	38.0	1,558·0
46–60	25	154·5	386·25
61–75	13	235·7	3,064·1
76–90	2	358·4	716·8
91–105	—	—	—
106–120	1	397·16	397·16
Total for 20%	114	—	6522·31
Total for 100%	570	—	32611.55 or 33 tonnes.

263. By analysis Double sampling the detailed distribution of growing stock to the various girth classes is as follows;—

For 20%	Sapling	46–60	61–75	76–90	Total
Enumeration	2	4	—	3	9
For 100% (× 5)	10	20	—	15	45

The other girth classes are anticipated to be absent as per double sampling.

264. Following is the comparative study of sandal enumeration done in 1962 and 1976.

Girth class in cm.	1962 Total enumeration				1976 enumeration amplified to 100%				
	Spiked trees.	Healthy trees.	Total.	Percentage of spike to the total trees.	Spiked trees	Healthy trees.	Dead trees.	Stumps.	Total.
0–15	—	—	—	—	—	10	—	—	10
16–30	138	15	153	90%	—	—	160	35	195
31–45	391	22	413	94·7%	—	—	205	25	230
46–60	317	9	326	97·2%	—	20	125	5	150
61–75	176	4	180	97·8%	—	—	65	—	65
76–90	101	—	101	100%	—	15	10	—	25
91–105	47	—	47	100%	—	—	—	—	—
106–120	25	—	25	100%	—	—	5	—	5
121–135	3	—	3	100%	—	—	—	—	—
136–150	4	—	4	100%	—	—	—	—	—
Above 150	1	—	1	100%	—	—	—	—	—
Total for 100% ..	1,203	50	1,253	96%	—	45	570	—	680

265. From a study of the two enumeration details, one sees a marked deterioration in the growing stock. In fact sandal has been very nearly wiped out of the area (coupe II of Mottur series) in the last 15 years. Fresh recruitment is practically negligible. This area has been subjected to repeated fires and combined with a heavy toll spike has taken in the area, there is practically no sandal. This has formed the basis for reorientation of the coupe in the future prescriptions in part II.

266. After 1962 a total number of 467 trees were extracted before the 1976 enumeration was undertaken in this coupe. Accordingly there should be a balance of (1,253–467) 786 trees in the coupe as against 680 now enumerated (20% amplified to 100%.) This may be because of carrying the enumeration over 20% of the area amplified to 100% without doing cent per cent enumeration.

267. ESTIMATION OF HEARTWOOD YIELD OF GROWING STOCK FOR MOTTUR SC II BASED ON THE ENUMERATION.

Girth class in cm.	Total No. of trees.	Yield of heart-wood for the class per tree.	Total anticipated yield in Kgs.
0–15	2	—	—
16–30	—	—	—
31–45	—	—	—
46–60	4	38	152·0
61–75	—	—	—
76–90	3	235·7	707·1
Total for 20% enumeration.	9	—	859·1
Total for 100% (X5)	45	—	4295·5 or 4 tonnes.

268. Taking the number of trees dead in one year and less the yield from annual mortality of worked as follows :—

20% annual yield		20% Triennial yield		100% Triennial yield	
No. of trees.	Yield in tonnes.	No. of trees.	Yield in tonnes.	No. of trees.	Yield in tonnes.
4	0·382	12	1·146	60	5·730

EXPERIMENTS CONDUCTED TO DETERMINE THE DEFICITS AT VARIOUS STAGES IN SANDAL EXTRACTION.

269. In persuance of the orders of the Chief Conservator of Forests in his No. 48132/65 D3, dated 16–12–65 and No. 21836/65 D3; dated 28–4–65 experiments were carried out in Tirupathur Division to determine the permissible limit for normal deficits accuring in the case of sandalwood at the various stages of weighment.

270. During 1965–66 and 1966–67 four sets of sample of FCS. wood drawn from double lock were weighed every month, and their weights recorded for 12 months. The months in which the first weighment of each set was made were May, August, November and February. On 10–3–66, 30 Sandalwood trees were extracted in Singarapet SC II. These trees were rough cleaned, weighed and transported to FC depot. Where they were final cleaned and treated as V set of sample of FCS wood. Similar consignment of 30 trees received from Vellore Division on 19–5–66, was final cleaned and treated as VIth set for 12 months. These two sets were also weighed every months. All these lots are added to Double lock after twelth weighment of each lot. During 1968–69 and 1969–70 also the experiment was conducted on the same lines and 6 fresh sets were tackled. The detailed recorded weights are as follows :—

STATEMENT SHOWING THE WEIHGTS OF SETS OF SAMPLES OF F.C.S. WOOD RECORDED DURING 1965-66 AND 1966-67 IN D/L TIRUPATHUR SALE DEPOT,

TIRUPATHUR DIVISION (ON EXPERIMENT).

Serial Number.	Month and year of weighment.	Ist set of sample of FCS wood KGs. Kgs. gms.	IInd set of sample of FCS wood. Kgs. gms.	IIIrd set of sample of FCS wood. Kgs. gms.	IVth set of sample of F.C.S. wood. Kgs. gms.	Vth set of sample of F.C.S. wood (30 trees extracted Tirupathur Division). Kgs. gms.	VIth set of F.C.S. wood (30 trees extracted in Vellore Division). Kgs. gms.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	May 1965	2627·600						
2	June ,,	2603·500						
3	July ,,	2595·100						
4	August 1965	2604·600	2590·700					
5	September ,,	2610·700	2563·100					
6	October ,,	2605·100	2556·000	2617·600				
7	November ,,	2607·500	2551·800	2607·700				
8	December ,,	2608·200	2545·700	2584·600				
9	January 1966	2606·800	2537·700	2570·200	2623·200			
10	February ,,	2600·000	2517·900	2524·000	2585·000	2808·500		
11	March ,,	2577·600	2585·800	2495·300	2550·800	2777·900		
12	April ,,	2565·600	2473·900	2489·100	2543·900	2740·100	1083·100	
13	May ,,		2469·900	2485·600	2534·800	2736·000	1066·900	
14	June ,,		2467·700	2485·200	2532·800	2738·000	1064·400	
15	July ,,		2468·000	2488·800	2535.200	2746·500	1068·800	
16	August ,,			2492·300	2548·000	2761·100	1070·400	
17	September ,,			2502·700	2555·000	2760·600	1074·600	
18	October ,,				2565·300	2766·200	1072·900	
19	November ,,				2569·500	2763·100	1074·500	
20	December ,,				2556·400	2744·600	1068·100	
21	January 1967					2725·100	1060·400	
22	February ,,						1059·700	
23	April ,,							
	Net Deficit recorded at the end of 12th weighment.	62·000	122·700	114.900	66,800	83·400	32·900	
	Percentage of deficit.	2·36%	4·71%	4.39%	2·54%	2·97%	3·03%	Over all percentage for Stage IV 3·33%

STATEMENT SHOWING THE WEIGHTS OF 6 SETS OF SAMPLE OF F.C.S. WOOD DURING 1968–69 AND 1969–70 IN D/L TIRUPATHUR SALE DEPOT—TIRUPATHUR DIVISION (ON EXPERIMENT).

Serial Number.	Month and year of weighment.	Ist set of sample of FCS wood. Kgs. gms.	IInd set of sample of FCS wood. Kgs. gms.	IIIrd set of sample of FCS wood. Kgs. gms.	IVth set of sample of FCS wood (30 trees extracted). Kgs. gms.	Vth set of sample of FCS wood (30 trees extracted). Kgs. gms.	VIth set of sample of FCS wood (30 trees extracted). Kgs. gms.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	May 1968	2621·000						
2	June ,,	2612·500						
3	July ,,	2611·000						
4	August ,,	2613·000	2478·790					
5	September 1968	2616·900	2467·200					
6	October ,,	2616·200	2464·300					
7	November ,,	2614·500	2459·800	2464·900				
8	December ,,	2626.300	2465·900	2445·700		3845·000		
9	January 1969	2611·300	2450·200	2416·500		3793·500		
10	February ,,	2598·600	2438·000	2390·000	2623·000	3734·000		
11	March ,,	2585·100	2420·600	2371·000	2591·000	3680·500		
12	April ,,	2568·900	2411·500	2300·100	2576·500	3651·000		
13	May ,,		2421·200	2464·400	2590·500	3638·300		
14	June ,,		2415·300	2356·400	2575·000	3616·200	3805·800	
15	July ,,		2416·800	2358·400	2581·500	3609·700	3778·500	
16	August ,,			2375·200	2603·000	3640·000	3778·700	
17	September ,,			2369·600	2587·000	3617·000	3760·000	
18	October ,,			2390·200	2646·000	3657.000	3808·000	
19	November ,,				2639·100	3632·500	3800·000	
20	December ,,				2630·400		3797·100	
21	January 1970				2621·400		3779·700	
22	February ,,						3745·600	
23	March ,,						3715·200	
24	April ,,						3684·700	
25	May ,,						3713·700	
	Net Deficit recorded at the end of 12th weighment ..	52·100	61·900	74 700	1·600	221·500	92·100	
	Percentage of deficit	1·99	2·49	3·03	0·06	5·75	2.42	Over all percentage of stage IV 2·64

Section No. 2—

RESULTS OF ONE PER CENT POINT SAMPLING DONE BY THE RESOURCES SURVEY DIVISION DURING 1976 IN TIRUPATHUR DIVISION:—

271. Based on the on per cent point sampling carried out in all the R.Fs. of the division by the resources survey division, Madras the following statements are prepared and furnished herewith:—

(1) Statement showing the area of occurrence of sandalwood under various densities.

(2) Statement showing the area of occurrence of bamboo under various densities.

(3) Girthwar distribution of sandal in various RFs. of the Division.

(4) Distribution of bamboo clumps in various RFs. of the Division.

As these figures are directly based on the on forests point sampling amplified to cent per one per cent, the accuracy of the figures are to be accepted with certain reservation.

STATEMENT SHOWING THE AREA OF OCCURRENCE OF SANDALWOOD IN TIRUPATHUR DIVISION IN NORTH ARCOT DIVISION.

Serial number. (1)	*Name of R. F.* (2)	*Sparse 1 to 5 per ha.* (3)	*Scattered 6 to 15 per ha.* (4)	*Frequent 15 to 25 per ha.* (5)	*Abundant above 25 per ha.* (6)	*Total sandal bearing area in ha.* (7)	*Total Non-sandal area in ha.* (8)	*Total crea of the the R.F. in ha.* (9)
Tirupathur Range—								
1	Andiappanur	994 ha.	104 ha.	152 ha.	92 ha.	1,342 ha.	2,510.12 ha.	3,852.12 ha.
2	Inner Javadi	1,136	396	556	254	2,372	6,281.26	8,653.76
3	Mambakkam	1,050	380	180	124	2,634	1,674.84	4,308.84
4	Govindapuram	444	236	196	68	844	88.42	932.42
5	Singarapet	152	76	..	84	312	755.11	1,967.11
6	Singarapet Extension	687	144	..	280	1,111	1,706.21	2,817.23
7	Chinnasamudram	244	96	88	..	328	821.99	1,149.99
Alangayam Range—								
8	Inner Javadi	467	700	475	970	2,612	1,445.11	4,057.11
9	Alangayam	273	168	196	236	1,273	3,417.47	4,590.47
10	Mangalam	175	473	..	..	848	1,612.57	2,460.57
11	Jolarpet	183	..	..	..	188	484.36	672.20
12	Pungulam	1,243.08	237.01	84	749	2,313.09	1,411.36	3,784.45
Chengam Range—								
13	Nallapattu	425.56	168.64	89.44	573.76	1,254.40	737.53	1,991.93
14	Palamarathur	620.64	593.16	162.08	210.20	1,587.08	466.77	2,053.85
15	Ravandavadi	68.98	..	..	..	68.98	4,230.75	4,299.73
16	Damaraikadu	181.60	206.40	..	93.12	481.12	2,001.22	2,482.34
17	Tenmalai	2,648	336	76	..	3,060	8,283.79	11,343.79
18	Mudanai	445	105	..	..	455	2,392.05	2,847.05
Sathanur Range—								
19	Nathampalli	65	168	110	..	343	1,753.17	2,102.17
20	Swamimalai	546.50	82	..	..	628.50	1,835.85	2,464.35
21	Ponnaiar	67.20	82	..	..	149.20	19,509.98	19,659.18
22	Valasamalai	534	196	..	..	732.00	2,354.08	3,086.08

STATEMENT SHOWING THE AREA OF OCCURENCE OF BAMBOOS IN TIRUPATHUR DIVISION, NORTH ARCOT DISTRICT.

Serial number.	*Name of R. F.* (2)	*Sparse 1 to 5 clumps.* (3)	*Scattered 6 to 15 clumps.* (4)	*Frequent 15 to 25 clumps.* (5)	*Abundant over 25 clumps.* (6)	*Total bamboos bearing area in ha.* (7)	*TÆotal non-bamboos bearing area in ha.* (8)	*Total area of the R. F. in ha.* (9)
Tirupathur Range—								
	Andiappanur	324 ha.	130 ha.	278 ha.	376 ha.	1,108 ha.	1,744.12 ha.	3,852.12
2	Inner Javadi	..	404	304	2,856	3,654	5,089.76	8,653.76
3	Mambakkam	264	132	204	600	1,200	3,108.84	4,308.84
4	Singarapet	280	220	..	96	596	336.42	932.42
5	Singarapet Extension	..	142	280	90	512	2,305.23	2,817.23
Chengam Range—								
6	Paramanandal	52	..	..	..	52	561.84	613.84
7	Nallapattu	282.86	301.12	421.44	..	1,005.44	986.49	1,991.93
8	Palamarathur	141.12	152.16	199.52	..	492.80	1,561.05	2,059.85
9	Tenmalai	304.00	704	76	2,080	3,164	8,179.79	11,343.79

Serial number. (1)	Name of the R. F. (2)	1 to 5 cm. (3)	6 to 15 cm. (4)	16 to 35 cm. (5)	Aundant over 25 cm. (6)	Total bamboo bearing area in ha. (7)	Total non-bamboo bearing area in ha. (8)	Total area of the R. F. (9)
Alangayam Range—								
10	Mangalam Extension	85	137	..	..	222	809.98	1,031.98
11	Mangalam	242	100	416	312	1,070	1,390.57	2,460.57
12	Jolarpet	..	..	..	60	60	612.20	672.20
13	Alangayam	1,076	476	..	120	1,672	3,018.47	4,690.47
14	Pungulam	152	301.12	..	200	653	3,071.31	3,724.45
15	Inner Javadi	152	662	144	429	2,387	1,670.11	4,057.11
Sathanur Range :—								
16	Nathampalli	..	202	1,093	170	1,465	737.17	2,101.17
17	Swamimalai	..	88.40	478	360	826.40	1,613.95	2,464.35
18	Ponnaiar	84.80	266.40	..	..	451.20	19,207.98	19,659.18
19	Valasamalai	..	637	..	701	1,338	1,758.08	3,086.08

GIRTHWAR STATEMENT OF SANDAL TREES IN TIRUPATHUR DIVISION.

Serial number.	Name of the R. F.	15 to 30 cm.	31 to 60 cm.	61 to 90 cm.	1 to 120 cm.	121 to 150 cm.	151 and above cm.	Total.
I. Tirupathur Range—								
1	Andiapanur	4,475	5,560	590	80	..	..	10,705
2	Inner Javadi (Part)	18,515	14,285	815	100	180	..	33,895
3	Mambakkam R. F.	4,655	7,955	1,215	50	..	..	13,875
4	Mambakkam Extension R. F.	..	..	..	90	..	..	90
5	Govindapuram R. F.	3,185	3,595	140	70	..	..	6,990
6	Singarapet R. F.	4,800	2,905	705	..	..	..	8,140
7	Singarapet Extension R. F.	3,335	7,600	1,710	100	..	..	12,745
8	Chinnasamudram R. F.	1,000	2,010	160	..	..	..	3,170
II. Alangayam Range—								
1	Mangalam	2,240	110	..	..	..	..	2,350
2	Jolarpet R. F.	250	..	..	..	..	..	250
3	Alangayam	8,670	2,860	230	..	..	..	11,760
4	Pungulam	46,240	14,660	2,060	..	..	..	62,690
5	Inner Javadi	41,965	14,015	915	..	..	..	66,895
III. Chengam Range :—								
1	Palamarathur R.F.	8,030	12,290	2,550	230	..	..	23,100
2	Nallapattu	5,872	18,949	3,916	294	..	..	29,031
3	Tenmalai	4,380	7,240	3,065	345	110	380	15,520
4	Mudanai	1,700	560	..	..	..	..	2,260
5	Ravandavadi	460	120	..	..	..	..	580
6	Damaraikadu	5,330	2,480	200	..	..	..	8,010
IV. Sathanur Range—								
1	Ponnaiar	1,430	..	..	..	..	..	1,430
2	Valasamalai	1,645	1,305	395	..	..	..	3,345
3	Swamimalai	1,180	790	..	..	..	..	1,970

DISTRIBUTION OF BAMBOO CLUMPS IN TIRUPATHUR DIVISION.

Serial number.	Name of the R. F.	Total number of clumps.
I. Tirupathur Range—		
1	Andiappanur R. F.	25,160
2	Inner Javadi (Part)	1,93,045
3	Mambakkam R. F.	36,055
4	Mambakkam Extension R. F.	360
5	Singarapet Extension R. F.	1,640
II. Alangayam Range—		
1	Mangalam R. F.	21,700
2	Mangalam Extension I	880
3	Mangalam Extension II	740
4	Jolarpet R.F.	3,570
5	Alangayam R. F.	9,955
6	Jalarpatti R. F.	250
7	Pungulam R.F.	25,130
8	Inner Javadi (Part)	2,46,445
III. Chengam Range—		
1	Palamarathur R.F.	9,060
2	Nallapattu R.F.	855
3	Tenmalai R.F.	1,88,295
4	Mudanai R.F.	160
IV. Sathanur Range—		
1	Ponnaiar R.F.	2,910
2	Nathampalli R.F.	32,760
3	Valasamalai	43,445
4	Swamimalai R.F.	31,010

PROPOSED

WORKING PLAN

FOR

THE TIRUPATHUR FOREST DIVISION

1st April 1978 to 31st March 1988

PART-II

By

Thiru T. K. RAJAGOPALAN, I. F. S.

Deputy Conservator of Forests.

Under the Direction of
The Chief Conservator of Forests,
Madras-6.

Office of the Forest Working Plan Officer,
SALEM-636 007.

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PART II—FUTURE MANAGEMENT DISCUSSED AND PRESCRIBED.

CHAPTER I.

BASIS OF PROPOSALS.

Section 1—General Object of Management.

1. **The General Principles governing the objects of management are summarised as follows:—**

(1) To exploit the existing plantations of Eucalyptus species and planting the same in carefully selected areas, for the maximum production of pulpwood on a short rotation, with intensive management.

(2) To exploit all the dead sandalwood systematically and to regenerate sandal in carefully selected areas and to improve and supplement the growing stock.

(3) To exploit with due regard to silvicultural principles the resources of the forests in Bamboos after giving due rest and without allowing depletion as in the past and to regenerate bamboos in suitable areas to improve the bamboo production.

(4) To mprove and increase the commercial value and productivity of the forests by artificially raising plantations of hardwood species in areas considered suitable by intensive management.

(5) To exploit the plantations raised under village Forests (Farm Forestry) in the Division and to regenerate further the available areas and thus reduce the strain on the forests for supply of fuel, small timber, etc.

(6) To exploit the existing minor forests products and improve the minor forest products potential by artificially raising suitable species in suitable areas with intensive management.

(7) To provide grazing facilities to the villagers adjoining the forest consistant wth the principles of Forest conservency.

(8) To protect and conserve the forests from theft, fire and other abuses and improve the forest in the larger interests of agriculture, soil conservation, water supply, etc.

(9) To conserve wildlife and improve the stocking in the division in general.

(10) To improve the living conditions of hill villages by providing them work, educational facilities, wells, roads, and communications and to improve the living conditions of the lower staff by providing residential quarters for them to enable them to work with greater efficiency to achieve the object of management.

(11) To attain the maximum sustained financial return without sacrificing the long term interests of the forests.

Section 2: Method of treatment to be adopted.

2. This is discussed critically in the respective chapters as this will vary with each working circle. In brief it is as follows:—

3. *Sandal.*—The exploitation of sandal will be regulated on the basis of area by working annually, by proper sequence definite coupes earmarked for the purpopse. The boundaries of the coupes are described in detail and marked on the map for easy location. As far as possible the boundaries of the coupe follow natural features like ridges, rivers, roads, footpaths, etc. The natural selection system and departmental agency will continue in this case on a prescribed felling cycle, exploitation being confined to dead trees only. Three year felling cycle for reserve series and annual exploitation for village series will continue to be adopted.

4. *Bamboos.*—In view of the poor growing stock consequent to over exploitation in the past, exploitation of bamboos in the whole division will be given rest for a period of six years from 1975–76. A decision to resume or not to resume exploitation of bamboos from 1981–82 will have to be taken after a through inspection of the condition of bamboo growing stock at that time. If, the rest given is considered adequate, resumption of working of bamboo coupes in proper sequence may be undertaken after obtaining prior orders of the Conservator of Forests, Vellore circle. If it is considered necessary to extend the suspension of further working for a specified period of detailed report may be submitted by the Disrict Forest Officer to the Chief Conservator of Forests through the Conservator of Forests explaining the stand and orders of the Chief Conservator of Forests may be obtained for such postponement of working for a specified period.

The exploitation of bamboos will be through contractors' egency as in past. The felling cycle will be three years. Culm selection system will continue to be adopted. Bamboo exploitation in plantations raised, will be through departmental agency only.

5. *Fuel.*—The dismal condition of the fuel forests calls for a fresh thinking in the conventional prescriptions of laying out fuel series as a matter of routine. In the past decades fuel forests have been over exploited and it is hard to select forests of good yield for the purpose, for future fuel working. The worked fuel coupes at the end of the rotation have failed to establish in view of the massive occupation of such areas by unwanted species like Lantana, Acacia intsia, etc. which suppress the coppice growth and prevent its establishment.

For the above reasons and in view of large number of Farm Forestry and Eucalyptus plantations coming up for felling durng the plan period and the large quantity of fuel to be obtained in clearing areas for regeneration, it is proposed to give complete rest to the existing fuel forests of the Division during this plan period. Any how, to meet any contingent demand for more fuel during any year of this plan period from the public a reserve fuel series has been prescribed, and this may be taken up for working in the prescribed sequence after obtaining the prior orders of the Conservator of Forests, Vellore.

The fuel coupes will be worked on a 30 year rotation by simple coppice system and trees of economically important species will be retained after marking in the fuel coupes.

6. *Minor Forest Produce.*—The exploitation will be through contractor's agency and each Range will form the unit of lease with pescriptions for making smaller units for specific items, according to local need.

7. *Grazing.*—Grazing will continue to be regulted by issue of permit except in areas falling under the Forest Village System, applying closure whenever necessary in specific areas for definite period for silvicultural and other reasons.

8. *Farm Forestry.*—Under this scheme all tank beds of convenient extent and poramboke lands at the disposal of the Panchayat or Government are to be tackled. As the areas to be tackled annually depend on the physical and financial target allotted for the division and as the Panchayat concurrence has to be obtained before taking up such schemes, the area under annual regeneration is not prescribed specifically.

9. *Regeneration.*—Suitable site selection intensive soil preparation, proper choice of species and stringent after care and protection measures form the main basis of prescriptions. Management of existing plantations is included in the respective chapters, covering the working circles.

10. Miscellaneous Prescriptions.—Prescriptions and suggestions on matters not covered by the different working circles are indicated in this chapter. This covers subjects like, River canal plantations Avenue Plantations, Road maintenance, buildings, fire protection measures, wildlife management, etc.

11. In view of the overlapping jurisdiction of the Extension Forestry Division, Vellore and Crash Plantation Division, Vellore larger areas than normally tackled by the division are prescribed for regeneration.

Section 3: Working Circles and their areas.

12. To achieve the objects of management and inkeeping with the method of treatment formulated above, the following working circles are constituted.

Serial number.	*Name of working circle*		*Area in hectare.*
1	Eualyptus working circle	...	2969 05
2	Sandal working circle	...	399264 02
3	Bamboo working circle	...	66759 11
4	Reserved fuel working circle	...	184 00
5	Village Forest working circle	...	8400 00
6	Hardwood plantation working circle	...	6045 66
7	Minor Forest produce working circle	...	125824 27
8	Grazing working circle	...	125094 27

13. *Period of the Plan.*—This working plan will be in force for a period of ten years from April 1978.

CHAPTER II.

THE EUCALYPTUS WORKING CIRCLE.

CHAPTER I—GENERAL CONSTITUTION.

14. This working circle will comprise of areas selected for being planted with Eucalyptus tereticornis (Eucalyptus hybrid) and Eucalyptus citriodora as well as the fairly successful existing plantations of the above species, either raised as pure crop or in mixture with bamboos or other species, during the past. The working circle is constituted with the main object of converting the potential but degraded forest of low fuel yield into plantations, to produce and establish a steady supply of industrial pulpwood to the growing demand of wood based industries in the State.

15. Conversion of degraded scrub jungles into Eucalyptus plantations was stated over a decade ago with the object of supplying fuel to Madras City. With this object, plantations were raised in almost all Ranges with varying degree of success. Initially Eucalyptus hybrid was viewed as the universal species that could grow under varied edaphic, climatic and biotic conditions and was thought to be the panacea of all silvicultural ills and this belief resulted in its indiscriminate planting over the entire State stretching from moist tracts on the one hand and low lying to elevated hills and mountains on the other. But past experience of its performance under different edaphic climatic conditions has exploded this myth and shocked the professional foresters who had stacked high hopes and reliance on this exotic, for future planting programmes. Field observations have shown that this is not a foolproof species which may be adopted to all soil conditions. Its growth performance has been optimum, only on areas possession deep fertile loamy soils, well drained with adequate moisture conditions.

16. But one fact has to be admitted that no other species whether indigeneous or exotic fared half as well as Eucalyptus hybrid in the dry plain forests in view of its comparatively higher resistance to drought, fast growth and built in protection against browsing. Its power to resist fire, superior coppicing power and suitability as industrial pulp, etc., make it more desirable as regards the choice of species in suitable localities and raising of successful plantations of this species, will add to the value of growing stock.

17. Eucalyptus citriodors has been raised on the Yelagiri hills with good amount of success. This working circle includes areas prescribed for future planting of the species in Jolarpet Reserved Forest on a small scale, as suitable areas for raising this species is very limited.

Section 2—Distribution of the area.

18. The following statement gives a detailed list of Eucalyptus plantations raised till 1976–77 in Tirupathur Division with year of raising, locality, cost of raising, year of felling, revenue, realised from felling, yield, etc.

19. Some of the plantations listed out in the foot note of the above statement have either poor stocking or with scattered trees only and are excluded from prescriptions for future fellings.

DETAILED LIST OF EUCALYPTUS PLANTATIONS IN TIRUPATHUR DIVISION RAISED TILL 1976–77.

Serial number.	Year.	Name of Range.	Locality with Reserved Forests.	Area in ha.	Cost of raising including maintenance cost upto 1975–76.	Year felling.	Sale amount realised.	Yield in tonnes.	Present condition.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1.	1959 ..	.. Alangayam ..	Nagaluthu Reserved Forest ..	0·80	....	1977	10,394·00	....	60 per cent.	Sold along with 61, 62 and 63 Nagaluthu Reserved Forest Eucalyptus plots and this amount is for all the plots falls under the area handed over to Astrophysical observatory.
2.	1959 ..	.. Do.	Inner Javadi Reserved Forest ..	4·00	....	1977–78	3,600·00	....	not traceable ..	....
3.	1961 ..	.. Sathanur.	Radhapuram Reserved Forest ..	0·81	445·74	....	....	....	Do.	....
4.	1961 ..	.. Do.	Ponniar Reserved Forest near Dam.	0·81	263·10	....	....	....	30 per cent ..	....
5.	1961 ..	.. Do.	P. Swamimalai Reserved Forest EH cum bamboo.	12·14	733·30	....	....	....	not traceable.	....
6.	1961 ..	.. Do.	Nathampalli Reserved Forest ..	8·09	107·00	....	....	....	Do.	....
7.	1961 ..	.. Do.	Poomalai Reserved Forest ..	4·05	762·68	....	....	....	Do.	....
8.	1961 ..	.. Chengam.	Anandavady Reserved Forest ..	0·81	215·51	....	....	....	Do.	Area handed over to the state seed farm.
9.	1961 ..	.. Do.	Anandavady Reserved Forest EH cum bamboo.	12·14	1,795·31	....	....	....	Do.	Do.
10.	1961 ..	.. Tirupathur.	Singarapet Reserved Forest ..	4·05	706·15	1970–71	1,025·00	....	50 per cent ..	....
11.	1961 ..	.. Alangayam.	Nagaluthu Reserved Forest ..	4·20		1977–78	Sold along with Eucalypts plot 59.		60 per cent	
12.	1961 ..	.. Do.	Alangayam Reserved Forest ..	4·00	305·00	1977–78	3,060.00	....	Very poor stocking.	Sold along with 1962 and 1963 Alangayam Eucalyptus plots.
13.	1961 ..	.. Do.	Nagaluthu Reserved Forest ..	2·43	304·74	....	....	....	not traceable.	....
14.	1961 ..	.. Do.	Inner Javadi Reserved Forest ..	2·02	625·00	....	....	....	Do.	....
15.	1961 ..	.. Do.	Inner Javadi Reserved Forest Mantharakuttai Eucalyptus cum bamboo.	12·14	1,565·80	....	....	....	Failure Do. ..	....
16.	1962 ..	.. Tiruvannamalai.	Sorakolathur Reserved Forest ..	20·64	1,034·00	1973–74	1,754·00	59·000	20 per cent ..	....
17.	1962 ..	.. Sathanur.	Radhapuram Reserved Forest ..	10·12	1,893·72	....	....	....	not traceable.	
18.	1962 ..	.. Do.	Ponniar Reserved Forest near Dam.	12·50	3,136.91	1973–74	4,413·00	....	40 per cent ..	....
19.	1962 ..	.. Do.	P. Swamimalai Reserved Forest Eucalyptus cum bamboo.	12·14	1,976·36	....	....	....	not traceable.	Area handed over to state seedfam.
20.	1962 ..	.. Chengam.	Anandavady Reserved Forest. ..	4·05	1,740·48	....	....	....	Do.	
21.	1962 ..	.. Do.	Anandavady Reserved Forest Eucalyptus cum bamboo.	12·14	1,405·26	....	....	....	....	Do.

DETAILED LIST OF EUCALYPTUS PLANTATIONS IN TIRUPATHUR DIVISION RAISED TILL 1976-77—*cont.*

Serial number	*Year.*	*Name of Range.*	*Locality with Reserved. Forests.*	*Area in ha.*	*Cost of raising including maintenance cost upto 1975–76.*	*Year felling.*	*Sale amount realised.*	*Yield in tonnes.*	*Present condition.*	*Remarks.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
22.	1962	Tirupathur.	Singarapet Reserved Forest	4·86	681·42	1973–74	2,009·00	48·00	60 per cent	....
23.	1962	Alangayam.	Nagaluthu Reserved Forest	4·00	....	1977–78	Sold along with Eucalyptus plot 1961.	....	55 per cent	....
24.	1962	Do.	Alangayam Reserved Forest	4·00	793·34	1977–78	Sold along with 1961 Eucalyptus plot.	....	Very poor stocking.	....
25.	1962	Do.	Jolarpet Reserved Forest	2·02	576·76	....	....	....	not traceable.	....
26.	1962	Do.	Jolarpet Reserved Forest Eucalyptus cum bamboo.	12·14	1,268·71	1972–73	3,993·00	128·00	60 per cent	....
27.	1962	Do.	Nagaluthu Reserved Forest	4·05	797·34	1973–74	1,971·25	56·00	55 per cent	....
28.	1962	Do.	Pungulam Reserved Forest Eucalyptus cum bamboo.	12·14	1,473·74	1974–75	4,870·00	75·00	40 per cent	....
29.	1962	Do.	Inner Javadi Reserved Forest Mantharakuttai Eucalyptus cum bamboo.	12·14	1,814·55	1974–75	650·00	10·000	Very poor stocking.	....
30.	1962	Do.	Inner Javadi Reserved Forest Naickanur Eucalyptus cum bamboo.	12·14 139·80	1,433·51	1974–75	2,835·00	45·000	20 per cent	....
31.	1963	Tiruvannamalai.	Sorakolathur Reserved Forest	20·23	9,130·80	1973–74	1,720·00	40·000	30 per cent	....
32.	1963	Do.	Kavuthimalai Reserved Forest	20·64	9,738·13	1973–74	Sold along with 1963 Tippakadu EH plot.	1963	Failure	....
33.	1963	Do.	Kannamadai Reserved Forest	10·12	4,163·63	1973–74	2,581·00	39·000	20 per cent	....
34.	1963	Do.	Do.	20·23	....	1973–74	4,189·00	90·000	40 per cent	....
35.	1963	Do.	Tippakkadu Reserved Forest East.	20·23	8,599·90	1973–74	4,571·98	87·000	35 per cent	....
36.	1963	Do.	Tippakkadu Reserved Forest North.	11·33	4,886·77	1973–74	2,571·91	950·00	30 per cent	....
37.	1963	Do.	Tippukkadu Reserved Forest South Bit I. Bit II.	10·12 4·05	3,463·39	1973–74	510·00	6·000	Very poor stocking.	Departmental extraction done Expenditure incurred Rs 381·60
38.	1963	Sathanur	P. Swamimalai Reserved Forest EH cum bamboo.	18·21	3,944·36	....	....	....	not traceable.	
39.	1963	Chengam	Mudanoi Reserved Forest Eucalyptus cum bamboo.	35·21	7,241·81	1973–74	2,112·00	50·000 (EH only)		....
40.	1963	Do.	Anandavady Reserved Forest Eucalyptus cum bamboo.	23·48	3,480·47	....	1,700·00	....		Area handed over to state seed farm.
41.	1963	Tirupathur	Singarapet Reserved Forest	10·92	2,514·35	1973–74	2,512·00	47·000	75 per cent	....

42.	1963 ..	.. Alangayam ..	Nagaluthu Reserved Forest ..	3·30	261·00	1977–78	Sold along with 1959 Eucalyptus plot.	....	55 per cent ..	...
43.	1963 ..	.. Do.	Alangayam Reserved Forest ..	4·00	354·06	1977–78	Sold along with 1961 Eucalyptus plot.		55 per cent ..	....
44.	1963 ..	.. Do.	Jolarpet Reserved Forest ..	2·02	150·19	....	....	....	not traceable ..	....
45.	1963 ..	.. Do.	Jolarpet Reserved Forest Eucalyptus-*cum*-bamboo.	10·93	1,861·89	1973–74	5,027·80	135·000	55 per cent ..	....
46.	1963 ..	.. Do.	Narasingapuram Reserved Forest	4·05	938·18	1973–74	1,437·75	48·000	50 per cent ..	....
47	1963	Do.	Narasingapuram RF	6.07	918·86	..	..	..	50 per cent	
48	,,	Do.	Kalarapatti RF Euc.-*cum*-bamboo	23·48	4,457·05	1974–75	1,200·00	20·000	Very poor stocking	
49	,,	Do.	Poongulam RF Euc.-*cum*-bamboo	12·14	2,028·18	1973–74	4,856·00	135·000	50 per cent	
50	1964	Tiruvannamalai	Sorakalathur RF	14.16	5,397.53	1977–78	1,300·00	..	20 per cent sold along with 1963 euc. plot.	
51	,,	Do.	Kavuthimalai RF	16·19	6,632·69	..	..	..	Very poor stocking	
52	,,	Do.	Kannamadai RF South	14·16	6,436·91	1977–78	50·00	..	Do.	
53	,,	Do.	West	9·30	4,831·75	1977–78	Sold along with 1964 Euc. plot (south)	..	Do.	
54	,,	Do.	Eraiynrmalai RF	20·23	6,838·51	1976–77	325·00	7·000	Do.	
55	,,	Do.	Tippakadu RF North	9.30	4,787·27	1977–78 }	760·00	..	Very poor stocking, sold along 1965 to 1969 Euc. plot. (Tippakadu)	
56	,,	Do.	East	16·19	7,746·57	1977–78 }				
57	,,	Sathanur	Poomalai RF	9.30	6,479.34	1977–78	14,100·00	..	80 per cent	
58	,	Do.	P. Swamimalai RF Euc.-*cum*-bamboo	14·57	3,586·68	1977–78	7,130·00	..	.. Sold along with 1965, 1966 Swamimalai Euc.-*cum*-bamboo plots.	
59	,,	Do.	Pinjur RF 'B' block East	16·19	12,282·88	1976–77	5,184·00	165·000	50 per cent	
60	,,	Do.	Pinjur RF 'B' block West	24.28	17,512.79	..	..	..	.. Area handed over to State Seed Farm.	
61	,,	Chengam	Anandavadi RF	4.86	2,914·65	1976–77	5,880·00	105·000	60 per cent	
62	,,	Do.	Euc.-*cum*-bamboo	36.02	7,778·96	..	..	..	..	
63	,,	Do.	Mudanai RF Euc.-*cum*-bamboo	19·83	3,192·26	1976–77	2,316·00	50·000	30 per cent	
64	,,	Do.	Damarai Kadu RF Damaraikadu series I	21.10	7,337·54	1976–77	4,410·00	66·000	40 per cent	
65	,,	Do.	Damarai Kadu Pudupalayam series I	22·66	11,808·76	1976–77	3,360·00	98·000	30 per cent	
66	,,	Do.	Damarai Kadu, Poraiyankulam series I	29·60	14,945·90	1976–77	3,433·00	70·000	30 per cent	
67	,,	Tirupathur	Singarapet Extn., RF	16·59	10,224·66	1976–77	16,600·00	387·000	75 per cent	
68	,,	Alangayam	Jolarpet RF Euc.-*cum*-bamboo	13·10	971·97	1976–77	10,021·00	129·500	50 per cent	
69	,,	Do.	Nagaluthu RF Kottur series I	11·33	3,505·07	1977–78	1,469·00	..	40 per cent	

DETAILED LIST OF EUCALYPTUS PLANTATIONS IN TIRUPATHUR DIVISION RAISED TILL 1976-77—*cont.*

Serial number.	*Year.*	*Name of Range.*	*Locality with Reserved Forests.*	*Area in ha.*	*Cost of raising including mainten-ance cost upto 1975–76.*	*Year felling.*	*Sale amount realised.*	*Yield in tonnes.*	*Present condition.*	*Remarks.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
70	1964	**Alangayam**	Kalarapatti RF Euc. cum bamboo	24·28	6,242·24	1977–78	3,518·00	..	10 per cent	Very poor stocking sold along with 1965 Kalarapatti plot.
71	,,	Do.	Pungulam **RF** EH *cum*-bamboo	13·10	2,253·27	1977–78	7,986·00	..	60 per cent	
72	1965	Tiruvannamalai	Tippakadu **RF** South	10·12	5,702·21	1977–78	Sold along with 1964 Euc. plot.	..	Very poor stocking.	
73	,,	Do.	Sorakalathur RF	10·12	5,364·21	1977–78	Sold along with Sorakolathur plot.	..	20 per cent	
74	,,	**Sathanur**	Poomalai RF	7·69	4,102·21	1977–78	9,247·70	..	80 per cent	
75	,,	Do.	Pinjur RF 'C' Block EH-*cum*-bamboo	4·05	189·00	1976–77	1,494·00	..	25 per cent	
76	,,	Do.	Pinjur **RF** 'B' Block East	21·85	10,658·98	1977–78	1,573·80	..	30 per cent	
77	,,	Do.	Do. West	20·23	10,538·29	1976–77	1,313·00	20·000	20 per cent	
78	,,	Do.	P. Swamimalai RF EH-*cum*-bamboo.	12·54	1,848.86	1977–78	Sold along with 1964 Swamimalai plot	..	30 per cent	
79	,,	**Chengam**	Damaraikadu RF Damaraikadu series II	18.21	9,212.13	1976–77	4,498·00	..	40 per cent	
80	,,	Do.	Do. Pudupalayam series II	20.23	9,997·67	1976–77	1,527·00	46·000	20 per cent	
81	,,	Do.	Do. Periyakulam series II	23.07	7,816·25					
82	,,	Do.	Do. Anandavadi RF	4.86	1,690·71	1977–78	7,313·00	..	60 per cent	
83	,,	Tirupathur	Singarapet Extn. RF	14·57	6,288·83	1976–77	12,994·00	208·000	75 per cent	
84	,,	Do.	Govindapuram RF	6·60	1,312·50	1976–77	32,107·00	558·000	80 per cent	sold along with 1966 Govindapuram Euc. plot.
85	,,	Alangayam	Nagaluthu RF, Kottur Series II	11·73	5,912·39	..	..	..	50 per cent	
86	,,	Do.	Nagaluthu & Mangalam Extn. RF EH-*cum*-bamboo	11·30	3,735·54	1976–77	350·00	2·500	Very poor stocking	
87	,,	Do.	Narasingapuram RF EH-*cum*-bamboo	59·09	24,252·00	1977–78	29,936·00	..	60 per cent	
88	,,	Do.	Kalarapatty RF EH-*cum*-bamboo	29·14	9,979·88	1977–78	Sold along with 1964 Kalarapatti Euc. plot.	..	Very poor stocking	
89	1966	**Tiruvannamalai**	Sorakolathur RF Bit I Bit II	14·97 5·26	6,331·40	1976–77	1,105·00	36·000	25 per cent	
90	,,	Do.	Tippakadu RF North	10·12	4106·15	1977–78	Sold along with 1964 Tippakadu East EH plot.		Very poor stockings	

91	,,	Sathanur	Poomalai RF	8·09	3601·19	1977–78	6,166·40	..	75 per cent	
92	,,	Do.	Pinjur RF 'B' Block East III	23.47	8844·28	1977–78	7,245·00	..	60 per cent	
93	,,	Do.	West III	23·06	9,584·10	..	..	..	30 per cent	
94	,,	Do.	Ponniar RF Sorpamandal	34·80	14953·37	1976–77	7,988·00	..	60 per cent	
95	,,	Do.	Pinjur RF 'C' Block Euc. cum bamboo	10·93	2,744·25	1976–77	50·00	..	20 per cent	
96	,,	Do.	Porniar RF—Thandarampet Euc. cum bamboo	16·19	3,841·68	1977–78	2,041·20	..	40 per cent	
97	,,	Do.	P. Swamimalai RF Euc. cum bamboo	18·61	4,678·72	1977–78	Sold along with 1964 plot	..	30 per cent	
98	,,	Chengam	Anandavadi RF	4.45	1,431·33	1977–78	Sold along with 1965 plot	..		Very poor stocking
99	,,	Do.	Melchengam RF Euc. cum bamboo	14·16	3,299·05	..	..	..	..	
100	,,	Tirupathur	Govindapuram RF	11·73	2,198·70	1976–77	Sold along with 1965 Govindapuram RF EH plot	..	80 per cent	
101	,,	Alangayam	Jolarpet RF	11·80	1,395·80	1974–75	17,818·00	..	70 per cent	
102	,,	Do.	Jolarpet RF Euc. cum bamboo	31·16	3,980·22	1977–78	9,486·00	..	65 per cent	
103	,,	Do.	Nagaluthu RF Kottur series III	11·73	3,022·55	..	..	..	50 per cent	
				250·53						
104	1967	Tiruvannamalai	Sorakolathur RF	101·17	28,709·65	1977–78	Sold along with 1964 Sorakolathur plot.	..		Very poor stocking
105	,,	Do.	Tippakadu RF	101·17	22,821·49	1977–78	Sold along with 1964 Tippakadu Euc. plot.	..		Failure
106	,,	Sathanur	Poomalai RF Pinjur RF	5·66	3,280·83	1977–78	3,151·60	..		Sold along with 1968 EH plot
107	,,	Do.	'B' Block—East	13·35	6,804·25	1976–77	483·00	10·000	20 per cent	
108	,,	Do.	Do. West	21.85	11,706·65	1976–77	6,480·00	84·000	40 per cent	
109	,,	Do.	Ponniar RF Sorapanandal	30·35	16,471·00	1976–77	1,976·00	43·000	30 per cent	
110	,,	Chengam	Anandavadi RF	4·05	2,950·02	1977–78	Sold along with 1965 Euc. plot.	..	35 per cent	
111	,,	Alangayam	Jolarpet RF EH *cum.* bamboo	39·66	5,143·82	1977–78	7,543·00	..	55 per cent	
112	,,	Do.	Nagaluthu RF Kottur series IV	10·93	3,439·50	..	..	..	50 per cent	
				328·19						

DETAILED LIST OF EUCALYPTUS PLANTATIONS IN TIRUPATHUR DIVISION RAISED TILL 1976–77—*cont.*

Serial number.	*Year.*	*Name of Range.*	*Locality with Reserved Forests.*	*Area in ha.*	*Cost of raising including mainten-nance cost upto 1975–76.*	*Year felling.*	*Sale amount realised.*	*Yield in tonnes.*	*Present condition.*	*Remarks.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
113	1968	Tiruvannamalai	Tippakadu RF	40·00	14,394·00	1977–78	Sold along with 1964 Tippakadu	..	Very poor stocking	
114	,,	Do.	Sorakolathur RF East	60·00	26,792·75	1977–78	-do- Sorakalathur plot	..	Do.	
115	,,	Do.	do. 3 bits West	36·42						
116	,,	Sathanur	Poomalai RF	7·90	4,140·93	1977–78	Sold along with 1967 Euc. plot			
117	,,	Do.	Pinjur 'B' Block West	23·87	11,607·55	1976–77	135·00	..	Very poor stocking	
118	,,	Do.	Ponniar RF Sorapanandal	33·18	15,234·75	1977–78	1,065·00	..	30 per cent	
119	,,	Do.	Do. Thandrampet EH *cum* bamboo	38·04	18,762·26	1977–78	Sold along with 1964 P. Swamimalai plot	..	30 per cent	
120	,,	Chengam	Anandavadi RF	4·05	2,950·02	1977–78	Sold along with 1965 EH plot	..	40 per cent	
121	,,	Alangayam	Jolarpet RF EH *cum.* bamboo	42·50	8,704·02	1977–78	13,175·00	..	50 per cent	
122	,,	Do.	Do.	10·50	1,988·38	..	..	..	80 per cent	
123	,,	Do.	Nagaluthu RF Kottur series V	10·90	4,036·37	1977–78	6.666·00	..	55 per cent	
				308·05						
124	1969	Tiruvannamalai	Tippakadu RF	10·00	14,394·00	1977–78	Sold along with 1964 Tippakadu plot	..	Very poor stocking	
125	,,	Do.	Sorakalathur RF Bit I	60·00	30,132·35	1977–78	-do 1964 Sorakolathur plot	..	Do.	
			Bit II	15·37	3,248·11	1977–78		..	Do.	
126		Sathanur	Poomalai RF	8·90	4,222·55	1977–78	Sold along with 1967 plot (EH)	..	40 per cent	
127	,,	Do.	Pinjur RF 'B' Block West	18·52	6,895·25	..	..	..	30 per cent	
128	,,	Do.	Porniar RF—Thandrampet Bit I	12·95	28,127·07	1977–78	4,740·00	..	70 per cent	
			EH *cum* bamboo Bit II	27·11						
129	,,	Chengam	Anandavady RF	4·45	1465·45	1977–78	Sold along with 1965 EH plot	..	35 per cent	

150	1969	Alangayam	Nagaluthu RF Kottur series. C. IV	..	10.93	2,089.50	1977–78	1,271·00	..	50 per cent
					168.33					
131	1970	Tiruvannamalai	Sorakolathur RF.	Bit I	75.00	3,151.81	..	..	..	75 per cent
				Bit II	8.00	2,238.00	..	..	..	75 per cent
132	1970	Do.	Tippakadu RF		40.41	15,672.75	..	..	..	60 per cent
133	,,	Sathanur	Poomalai RF		8.00	4,571.00	..	..	..	50 per cent
134	,,	Do.	Pinjur RF B Block	East	21.90	11.314.38	..	..	..	35 per cent
135	,,	Do.	Do.	West	16.60	8,311.35	..	..	..	30 per cent
136	,,	Do.	Ponniar RF Sorapanandal		35.20	13,305.51	..	..	..	40 per cent
137	,,	Chengam	Anandavady RF		4.45	1,465.45	1976–77	1,557.00	..	..
138	,,	Alangayam	Nagaluthu RF Kottur series. C VII		10.10	2466.00	..	..	..	60 per cent
139	1971	Tiruvannamalai	Tippakadu RF		42.00	17,974.50	..	..	..	65 per cent
140	,,	Do.	Sorakolathur RF		70.00	29,780.00	..	..	..	55 per cent
141	,,	Sathanur	Poomalai RF		8.00	4,519.85	..	..	..	60 per cent
142	,,	Do.	Pinjur RF B Block–West		17.50	9,694.69	..	..	..	25 per cent
143	,,	Do.	Do. East		26.30	13,058.20	..	..	..	25 per cent
144	,,	Do.	Ponniar RF Sorapanandal.		36.00	19,238.44	..	..	..	40 per cent
145	,,	Chengam	Anandavady RF		3.64	1,524.90	1976–77	1,330.00	51.000	40 per cent
146	,,	Alangayam	Nagaluthu RF Euc.-*cum*-bamboo Series C.No. VIII		9.30	1,230.76	..	..	..	65 per cent
					212.74					
147	1972	Tiruvannamalai.	Sorakolathur RF		75.00	24,304.22	..	..	..	65 per cent
148	,,	Do.	Tippakadu RF		40.00	21,003.09	..	..	..	55 per cent
149	,,	Sathanur	Poomalai RF		9·50	6,201.91	..	..	..	60 per cent
150	,,	Do.	Pinjur RF B Block East.		23.20	16,208.00	..	..	.	60 per cent
151	,,	Do.	Do. West		14.30	10,565.00	..	..	.	40 per cent
152	,,	Do.	Ponniar RF— Sorapanardal		33.00	22,645.86	..	..	..	70 per cent
153	,,	Alangayam	Nagaluthu RF— Kottur series C IX		10.02	2,707.97	..	..	..	65 per cent
154	1973	Tiruvannamalai	Kannamadai RF		39.20	13,958.92	..	..	..	70 per cent
155	,,	Do.	Tippakadu RF		40.00	21,003.09	..	..	..	75 per cent
156	,,	Do.	Sorakolathur RF		80.80	43,054.98	..	..	..	65 per cent
157	,,	Sathanur	Poomalai RF		8.00	6,708.06	..	..	..	50 per cent
158	,,	Do.	Pinjur RF B Block East		22.70	15,075.00	..	..	..	60 per cent
159	,,	Do.	Do. West		19.00	13,472.00	..	..	..	65 per cent
160	,,	Alangayam	Nagaluthu RF— Kottur series X		9.40	2,944.20	..	..	..	55 per cent

DETAILED LIST OF EUCALYPTUS PLANTATIONS IN TIRUPATHUR DIVISION RAISED TILL 1976–77—*cont.*

Serial number.	*Year.*	*Name of Range.*	*Locality with Reserved Forests.*	*Area in ha.*	*Cost of raising including maintenance cost upto 1975–76.*	*Year felling.*	*Sale amount realised.*	*Yield in tonnes.*	*Present condition.*	*Remarks.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
161	1973	Alangayam	Jolarpet and Mangalam RF and Coupe I.	9.60	4,278.40	..	..	..	80 per cent	
				228.70						
162	1974	Sathanur	Pinjur RF C block	57.50	55,228·96	..	..	..	50 per cent	
163	1974	Alangayam	Mangalam RF C II	10.00	5,363.77	..	..	..	85 per cen	
				67.50						
164	1975	Do.	Jolarpet and Mangalam RF and C III	8.20	4,968.00	..	..	..	35 per cent	
165	1976	Do.	Do. C IV	8.80	2,801.76	..	..	..	75 per cent	
166	**197**	Do.	Nagaluthu RF	24.00	11,306.50	..	..	..	70 per cent	
				32.80						

Note.—Series Numbers 2, 3, 5 to 9, 12 to 15, 17, 19, to 21, 24, 25, 29, 32, 37, 38, 40, 44, 48, 51 to 56, 62, 70. 72, 86, 88, 90, 99, 104, 105, 113 to 115, 117, 124, 125, contain scattered growth or all under areas handed over to other departments and excluded from the prescriptions for felling.

19. The total area of the Eucalyptus working circle is distributed as follows, excluding plantations omitted from prescriptions due to poor stocking and scattered nature of tree distribution.

20. **Statement** showing the Reserve—War details of Eucalyptus plantations existing and proposed for Tirupathur Division.

Serial number. (1)	*Name of Range* (2)	*Name of RF with locality* (3)	*Regenerated area in ha.* (4)	*Prescribed area in ha.* (5)	*Total.* (6)	*Remarks.* (7)
1.	Tiruvannamalai	1. Scrakolathur RF	394.18	——	394.18	
		2. Tippakadu RF	193.97	——	193.97	
		3, Kannamadai RF	69.55	——	69.55	
		Total	657.70	——	657.70	
2.	Sathanur	1. Poomalai RF	81.04	100.00	181.04	
		2. P. Swamimalai RF	45.72	——	45.72	
		3. Ponniar RF	310.13	——	310.13	
		4. Pinjur RF B block.	344.40	——	344.40	
		5. Pinjur RF C block.	72.48	——	72.48	
			853.77	100.00	953.77	
3.	Chengam	1. Anandavady RF	34.81	——	34.81	
		2. Damaraikadu RF	134.87	——	134.87	
		3. Mudanai RF	55.04	——	55.04	
		Total	224.72	——	224.72	
4.	Tirupathur	1. Singarapet RF	19·83	——	19.83	
		2. Singarapet Extn. RF	31.16	——	31.16	
		3. Govindapuram RF	18.33	505.00	523.33	
		Total	69.32	505.00	574.32	
5.	Alangayam	1. Nagaluthu RF	146.72	——	146.72	
		2. Inner Javadi RF	12.14	——	12.14	
		3. Alangayam RF	4.00	——	4.00	
		4. Jolarpet RF	171.79	80.00	251.79	
		5. Pungulam RF	37.38	——	37.38	
		6. Narasingapuram RF	69.21	——	69.21	
		7. Mangalam RF	37.30	——	37.30	
		Total	478.54	80.00	558.54	

Division—Abstract.

1. Tiruvannamalai Range		657.70	——	657.70
2. Sathanur Range		853.77	100.00	953.77
3. Chengam Range		224.72	——	224.72
4. Tirupathur Range		69.32	505.00	574.32
5. Alangayam Range		478.54	80.00	558.54
	Grand Total	2,284.05	685.00	2,969.05

21. The following statement shows the detailed distribution of areas of conversion series selected for planting Eucalyptus hybrid and Eucalyptus citriodora under this working circle during the plan period.

Tabular statement for raising Eucalyptus plantations in Tirupathur Division.

Serial number.	*Name of Series and location.*	*Choice of species.*	*Year of raising.*	*Coupe number.*	*Area in ha.*	*Remarks.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	I. Sathanur Range:—					
	Ten Mudiyanur Eucalyptus plantation series.	Eucalyptus Hybrid	1978–79	I	10-00	
	Poomalai RF.		1979–80	II	10-00	
			1980–81	III	10-00	
			1981–82	IV	10-00	
			1982–83	V	10-00	
			1983–84	VI	10-00	
			1984–85	VII	10-00	
			1985–86	VIII	10-00	
			1986–87	IX	10-00	
			1987–88	X	10-00	
					100-00	
	II. Tirupathur Range—					
2.	Govindapuram Eucalyptus plantation series	Eucalyptus Hybrid.	1978–79	I	40-00	
	Govindapuram RF.		1979–80	II	40-00	
			1980–81	III	40-00	
			1981–82	IV	40-00	
			1982–83	V	40-00	
			1983–84	VI	40-00	
			1984–85	VII	40-00	
			1985–86	VIII	40-00	
			1986–87	IX	40-00	
			1987–88	X	40-00	
			1988–89	XI	40-00	
			1989–90	XII	40-00	
			1990–91	XIII	25-00	
					505-00	
	III. Alangayam Range—					
3.	Jolarpet Eucalyptus plantation series.	Eucalyptus citriodora.	1978–79	I	8-00	
	Jolarpet RF.		1979–80	II	8-00	
			1980–81	III	8-00	
			1981–82	IV	8-00	
			1982–83	V	8-00	
			1983–84	VI	8-00	
			1984–85	VII	8-00	
			1985–86	VIII	8-00	
			1986–87	IX	8-00	
			1987–88	X	8-00	
					80-00	
			Division Total.		685-00	

22. All plantations so far raised and proposed to be raised under this plan have been located in the field and marked in the detailed map showing the working circle and also in the management map.

Section 3—Analysis and valuation of the crop.

23. The area of plantations raised in the past vary considerably from year to year and from Range to Range, the lowest being 4.80 hectares in 1959 and 376.34 hectares in 1964. In the last few years, the area has been considerably low, as low as 8.20 hectares in 1975. Considering this and the variation in the espacement followed and the technique adopted differently, the nature of growth does not guarantee equal yield in any measure of accuracy and the regulation of yield becomesall the more complex.

Section 4—Method of treatment.

24. *Silvicultural system.*—The silvicultural system will be (1) Clearfelling followed by natural regeneration from coppice, supplemented by artificial regeneration wherever necessary, in the case of existing plantations.

(2) Clearfelling of miscellaneous growth followed by artificial regeneration in the areas newly included in the working circle.

25. *Choice of species.*—The species prescribed for all fresh planting in the plains will be Eucalyptus hybrid. Small trials in the planting with Eucalyptus Camaldulensis may be made and results studied. In the Yelagiri plateau, Eucalyptus citriodora will be planted.

26. *Rotation.*—As explained earlier, Eucalyptus hybrid tends to stagnat after an initail spurt in growth during the first 3 or 4 years. Thereafter the trees do not put on an appreciable increment in most cases atleast under conditions obtaining in the reserved forests of the Division. Though we do not have any precise data as to when the mean annual increment for the species culminates, from the experience gained from observations, it would appear that this will take place by about the eighth year. Further one could expect a higher rate of growth in the second rotation coppice crop. For these reasons it will not be desirable to postpone the fellings beyond the eighth year and hence a rotation of eight years is fixed for both Eucalyptus hybrid and Eucalyptus citriodora.

27. *Regulation of yield.*—With a complex crops as explained earlier, the yield regulation by area seems to be the nearest approach for sustained yield.

28. The yield from coupes to be clearfelled and converted into Eucalyptus plantations is not expected to yield more than 1 to 5 tonnes per hectare.

Section 5—Method of executing fellings.

29. The areas that will be available for fellings are of two categories, viz., (1) the natural forests earmarked for being clearfelled for planting up with Eucalyputus species and (2) the mature Eucalyptus plantations that will become due for felling according to the sequence in the tabular statement of felling furnished in section 6.

30. *Survey and demarcation.*—In the case of Eucalyptus plantations survey of the area to be clearfelled will be done in the month of January of the year of working. In case of plantations partly failed only effective area will be surveyed by running the survey line along the periphery of existing plantation area and the fact recorded accordingly. Failed patches inside the plantations will be included within the survey and such facts should be got recorded accordingly and for preparation of fair price statements such details should be given due regard.

The natural forest area earmarked for regeneration will be surveyed before the end of March of the previous year of planting, to provide adequate time for various preparatory works.

31. *Agency of exploitation.*—In the case of natural forests taken up for regeneration, where there is saleable growth, the surveyed area will be offered for sale in April of the previous year of plantation and the felling completed by the end of December. Wherever there is possibility to combine the condition of uprootal along with clearfelling, at the time of auction, it may be sold accordingly. As some contractors fail to fulfil the uprootal condition, and as the security deposit collected normally is insufficient to penalise for such lapse, it is obligatory to increase the security deposit sufficiently to penalise contractors for not carrying out uprootal work.

32. The period of lease for clearfelling, uprooted, etc., will not exceed 4 months for 10 hectares and 9 months up to 40 hectares and exact lease period to be decided before sale.

33. Where there is saleable growth and there is no demand in sales, the work of clearfelling should be done departmentally and fuel sold in public auction after proper collection and stacking.

34. Wherever there is demand for Kumri cultivation, the felled area should be devided into convenient bits by December and handed over to the Kumridars for preparatory works. If there is no demand for Kumri, the work of uprootal, ploughing, etc., should be carried out by the department in time for planting.

35. In the case of areas containing no saleable growth as in most of the areas to be converted, the area will be divided into convenient bits and handed over to the Kumridar for preparatory works by December of the year previous to the year of planting. It will be the responsibility of each Kumridar to clear the growth in the area allotted to him and prepare the site for planting by uprootal, ploughing, etc. The site should be ready for planting by the beginning of June at the latest. The Kumridar will be permitted to remove all the natural growth within his limits, except the reserved trees, to be marked for retention before allotment.

36. It is left to the discretion of the District Forest Officer to carry out any of the preparatory works like clearfelling, uprootal, etc., departmentally and then offer for Kumri cultivation depending on the local demand for Kumri cultivation.

37. The period of Kumri lease will be for two years to be renewed annually. The kumri lease will be by issue of permit under section 21 of the Madras Forest Act and a nominal security deposit of Rs. 10 per hectare or as may be fixed from time to time, will be collected from the Kumridar before entering into an agreement with him as per code prescriptions.

38. In the case of plantations mature for filling, the right to clearfell will be sold in auction after survey and demarcation. The sale will be held in February of the year of felling.

39. *Division of strips.*—For plantations less than 10 hectares, there is no need to devide the plantation coupe into strips. For plantations over 10 hectares, the coupe should be divided into strips of fairly equal size, each strip being not more than 20 hectares.

40. *Felling rules.*—Some of the important felling rules to be rigidly enforced in the felling of plantation coupe are as follows:—

(1) All Eucalyptus trees including the miscellaneous growth inside the plantation may be felled by the contractor.

(2) The felling should proceed systematically from one corner to the other. Only after completing the felling in one strip, the felling in the next strip should be permitted. The order of felling will be shown in the sketch accompanying the agreement.

(3) Only saws should be used for felling. Trees should be cut within 15 cm. from ground level. The stumps should be neat with the bark intact.

(4) Stumps should not be covered by branches or stacks of billets or any other material and should not be damaged in any manner.

(5) Saws only should be used for billeting to prevent wastage.

(6) Trees intended for Firewood will be sawn into billets of one metre length and stacked to size of not less than 3 m. by 2 m. by 1m. before removal.

(7) All M.F.P. yielding trees and all sandal trees and saplings should be left inside the coupe without felling.

41. The concerned beat guard or section forester should check the stacks before removal and submit weekly accounts of removals to his Range Officer concerned.

42. The sequence in which the coupes are to be converted into Eucalyptus plantations in each planting series is as given in paragraph 21.

ection 6— Tabular Statement for Fellings.

43. The sub-joined Statement shows the list of Eucalyptus plantations earmarked for felling in each year of the period of the Plan. With the adoption of eight years rotation in some years the area for felling will be abnormally low and with a view of minimise these abnormality some marginal adjustments are made by increasing the rotation age of some of the plantations to 9 or 10 years and felling accordingly prescribed.

TABULAR STATEMENT OF FELLINGS FOR EUCALYPTUS

Seria number. (1)	*Year of plantation.* (2)	*Name of Range.* (3)	*Name of RF Series and locality.* (4)	*Year in which felled after 1st rotation.* (5)
1	1959	Alangayam	Nagaluthu RF	1977–78
2	1961	Sathanur	Ponniar RF-Near Dam	....
3	1961	Tirupathur	Singarapet RF	1970–71
4	1961	Alangayam	Nagaluthu RF	1977–78
5	1962	Tiruvannamalai	Sorakolathur RF	1973–74
6	1962	Sathanur	Ponniar RF-Near Dam	1973–74
7	1962	Tirupathur	Singarapet RF	1973–74
8	1962	Alangayam	Nagaluthu RF	1977–78
9	1962	Do.	Jolarpet RF (EH cum bamboo)	1972–73
10	1962	Do.	Nagaluthu RF	1973–74
11	1962	Do.	Poongulam RF (Eucalyptus cum bamboo)	1974–75
12	1962	Do.	Inner Javadis RF Naickanur	1974–75
13	1963	Tiruvannamalai	Sorakolathur RF	1973–74
14	1963	Do.	Kannamadai RF	1973–74
15	1963	Do.	Do.	1973–74
16	1963	Do.	Thippakadu RF-East	1973–74
17	1963	Do.	Thippakadu RF-North	1973–74
18	1963	Chengam	Mudanai-RF-3 bits (Euc. cum bamboo)	1973–74
19	1963	Tirupathur	Singarapet RF	1973–74
20	1963	Alangayam	Nagaluthu RF	1977–78
21	1963	Do.	Alangayam RF	1977–73
22	1963	Do.	Jolarpet (EH cum bamboo)	....
23	1963	Do.	Narasingapuram RF	1973–74
24	1963	Do.	Narasingapuram RF	.....
25	1963	Do.	Pungulam RF (EH cum bamboo)	1973–74
26	1964	Tiruvannamalai	Sorakolathur RF	1977–78
27	1964	Sathanur	Poomalai RF series	1977–78
28	1964	Do.	P. Swamimalai RF (EH cum bamboo)	1977–78
29	1964	Do.	Pinjur RF B Block East	1976–77
30	1964	Do	Pinjur RF B Block West	1976–77
31	1964	Chengam	Anandavady RF	1976–77
32	1964	Do.	Mudanai RF (EH cum bamboo)	1976–77
33	1964	Do.	Damaraikadu RF and Series	1976–77
34	1964	Do	Damaraikadu RF, Pudupalayam series	1976–77
35	1964	Do	Damaraikadu Periyankulam series	1976–77
36	1964	Tirupathur	Singarapet Extn. RF	1976–77
37	1964	Alangayam	Jolarpet RF (EH cum bamboo)	1976–77

PLANTATION IN TIRUPATHUR DIVISION.

Proposed year for Felling and Area in Hectares.									
1978–79 (6)	1979–80 (7)	1980–81 (8)	1981–82 (9)	1982–83 (10)	1983–84 (11)	1984–85 (12)	1985–86 (13)	1986–87 (14)	1987–8 (15)
..	..	..	..	..	..	..	0·80	..	..
0·81	..	..	..	..	..	..	..	0·81	..
4·05	..	..	..	..	..	..	..	4·05	..
..	..	..	..	..	..	..	4·20	..	..
..	..	..	..	20·64	..	..	..	..	..
..	..	..	12·50	..	..	..	..	..	..
..	..	..	4·86	..	..	..	..	..	..
..	..	..	..	..	..	..	4·00	..	..
..	..	12·14	..	..	..	..	..	..	..
..	..	..	4·05	..	..	..	..	..	..
..	..	..	..	12·14	..	..	..	..	..
..	..	..	..	12·14	..	..	..	..	..
..	..	..	..	20·23	..	..	..	..	..
..	..	..	..	..	10·12	..	..	..	..
..	..	..	20·23	..	..	..	..	..	..
..	..	..	..	..	20·23	..	..	..	..
..	..	..	..	..	11·33	..	..	..	..
..	..	..	..	..	35·21	..	..	..	..
..	..	..	10·92	..	..	..	..	..	..
..	..	..	..	..	..	..	3·30	..	..
..	..	..	..	..	..	..	4·00	..	..
..	..	..	10·93	..	..	..	..	..	..
..	..	..	4·05	..	..	..	..	..	..
6·07	..	..	..	..	..	..	..	6·07	..
..	..	..	12·14	..	..	..	..	..	..
..	..	..	..	..	..	..	..	14·16	..
..	..	..	..	..	..	..	9·30	..	..
..	..	..	..	..	..	..	..	14·57	..
..	..	..	..	..	..	16·19	..	..	..
24·28	..	..	..	..	..	..	..	24·28	..
..	..	..	..	..	..	4·86	..	..	..
..	..	..	..	..	..	19·83	..	..	..
..	..	..	..	..	..	21·10	..	..	..
..	..	..	..	..	..	22·66	..	..	..
..	..	..	..	..	..	29·60	..	..	..
..	..	..	..	..	..	16·59	..	..	..
..	..	..	..	..	..	13·10	..	..	..

Serial number	Year of plantation	Name of Range.	Name of RF Series and locality.	Year in which felled after 1st rotation.
(1)	(2)	(3)	(4)	(5)
38	1964	**Alangayam**	Nagaluthu RF-Kottur series I.	1977–78
39	1964	Do.	Pungulam RF (EH cum bamboo)	1977–78
40	1965	Tiruvannamalai	Sorakalathur RF	1977–78
41	1965	Sathanur	Poomalai RF	1977–78
42	1965	Do.	Pinjur RF 'C' Block (Euc. cum bamboo)	1976–77
43	1965	Sathanur	Pinjur RF B Block East	1977–78
44	1965	Do.	Pinjur RF B Block West	1976–77
45	1965	Do.	P. Swamimalai RF (EH cum bamboo)	1977–78
46	1965	Chengam	Damaraikadu RF & series	1976–77
47	1965	Do.	Damaraikadu RF-Series Pudupalayam	1976–77
48	1965	Do.	Poraiyankulam	1976–77
49	1965	Do.	Anandavadi RF	1977–78
50	1965	Tirupathur	Singarapet Extn. RF.	1976–77
51	1965	Do.	Govindapuram RF	1976–77
52	1965	Alangayam	Nagaluthu RF (Kottur series-II)	..
53	1965	Do.	Narasingapuram RF (EH cum bamboo)	1977–78
54	1966	Tiruvannamalai	Sorakolathur RF-Bit I	1976–77
			Bit-II	1976–77
55	1966	Sathanur	Poomalai RF	1977–78
56	1966	Do.	Pinjur RF 'B' Block East	1977–78
57	1966	Do.	Pinjur RF 'B' Block-West	..
58	1966	Do.	Ponniar RF-Sorapanandal	1976–77
59	1966	Do.	Pinjur RF 'C' Block (EH cum bamboo)	1976–77
60	1966	Do.	Ponniar RF-Thandrampet- (EH cum bamboo)	1977–78
61	1966	Do.	P. Swamimalai RF Do.	1977–78
62	1966	Chengam	Anandavadi RF	1977–78
63	1966	Tirupathur	Govindapuram RF	1976–77
64	1966	Alangayam	Jolarpet RF	1974–75
65	1966	Do.	Jolarpet RF (EH cum bamboo)	1977–78
66	1966	Do.	Nagaluthu RF-Kottur Series-III	..
67	1967	Sathanur	Poomalai RF	1977–78
68	1967	Do.	Pinjur RF 'B' Block East	1976–77
69	1967	Do.	Pinjur RF 'B' Block West	1976–77
70	1967	Do.	Ponniar RF-Sorapanandal	1976–77
71	1967	Chengam	Anandavadi RF	1977–78
72	1967	Alangayam	Jolarpet RF (EH—*cum* bamboo)	1977–78
73	1967	Do.	Nagaluthu RF(Kottur series)IV	..
74	1968	Sathanur	Poomalai RF	1977–78
75	1968	Do.	Ponniar RF—Sorapanandal	1977–78
76	1968	Do	Ponniar RF—Thandrampet	1977–78

Proposed year for Felling and Area in Hectares.

1978–79	1979–80	1980–81	1981–82	1982–83	1983–84	1984–85	1985–86	1986–87	1987–88
(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
..	..	..	..	..	..	..	11·33	..	..
..	..	..	..	..	..	..	13·10	..	..
..	..	..	..	..	..	..	..	..	10.12
..	..	..	..	..	..	..	7·69	..	..
..	..	..	..	..	..	4·05	..	..	..
..	..	..	..	..	..	..	..	21·85	..
..	..	..	..	..	..	20·23	..	..	..
..	..	..	..	..	..	..	..	..	12 54
..	..	..	..	..	..	18·21	..	..	..
..	..	..	..	..	..	20·23	..	..	..
..	..	..	..	..	..	23·07	..	..	..
..	..	..	..	..	..	..	..	..	4·86
..	..	..	..	..	..	14·57	..	..	..
..	..	..	..	..	..	6·60	..	..	..
11·73	..	..	..	..	..	..	..	11·73	..
..	..	..	..	..	..	..	59·09	..	..
..	..	..	..	..	..	14·97	..	..	..
..	..	..	..	..	..	5·26	..	..	..
..	..	..	..	..	..	..	8·09	..	..
..	..	..	..	..	..	..	..	23·47	..
23·06	..	..	..	..	..	..	..	23·06	..
..	..	..	..	..	..	34·80	..	..	..
..	..	..	..	..	..	10·93	..	..	..
..	..	..	..	..	..	..	16·19	..	..
..	..	..	..	..	..	..	..	18·61	..
..	..	..	..	..	..	..	4·45	..	..
..	..	..	..	..	..	11·73	..	..	..
..	..	..	..	11·80	..	..	..	..	..
..	..	..	..	..	..	..	31·16	..	..
11·73	..	..	..	..	..	..	..	11·73	..
..	..	..	..	..	..	..	5·66	..	..
..	..	..	..	..	..	13·35	..	..	..
..	..	..	..	..	..	21·85	..	..	..
..	..	..	..	..	..	30·35	..	..	..
..	..	..	..	..	..	..	..	..	4·05
..	..	..	..	..	..	..	39·66	..	..
10·93	..	..	..	..	..	..	..	10·93	..
..	..	..	..	..	..	..	7·90	..	..
..	..	..	..	..	..	..	33·18	..	..
..	..	..	..	..	..	..	..	38·04	..

Serial number.	Year of plantation.	Name of Range.	Name of RF Series and locality.	Year in which felled after 1st rotation.
(1)	(2)	(3)	(4)	(5)
77	1968	Chengam	Anandavadi RF	1977–78
78	1968	Alangayam	Jolarpet RF—(EH *cum* bamboo)	1977–78
79	1968	Do.	Do.	..
80	1968	Do.	Nagaluthu RF—Kottur Series V	1977–78
81	1969	Sathanur	Poomalai RF	1977–78
82	1969	Do.	Pinjur RF 'B' Block—West	..
83	1969	Do.	Ponniar RF—Thandrampet Euc. *cum* bamboo Bit I Ponniar RF—Thandrampet Euc. *cum* bamboo Bit II	1977–78
84	1969	Chengam	Anandavadi RF	1977–78
85	1969	Alangayam	Nagaluthu RF—Kottur Series VI	1977–78
86	1970	Tiruvannamalai	Sorakolathur RF—Bit I Sorakolathur RF—Bit II	.. ..
87	1969	Do.	Tippakkadu RF	..
88	1969	Sathanur	Poomalai RF	..
89	1969	Sathanur	Pinjur RF 'B' Block-East	..
90	1970	Sathanur	Pinjur RF 'B' Block-West	..
91	1970	Do.	Ponniar RF	..
92	1970	Chengam	Anandavadi RF	1977–78
93	1970	Alangayam	Nagaluthu RF—Kottur Series VII (EH— *cum* bamboo)	..
94	1971	Tiruvannamalai	Sorakolathur RF	..
95	1971	Do.	Tippakadu RF	..
96	1971	Sathanur	Poomalai RF	..
97	1971	Do.	Pinjur RF 'B' Block-West	..
98	1971	Do.	Pinjur RF 'B' Block-East	..
99	1971	Sathanur	Ponniar—Sorapanandal	..
100	1971	Chengam	Anandavady RF	1976–77
101	1971	Alangayam	Nagaluthu RF —Kottur Series VIII	..
102	1972	Tiruvannamalai	Sorakolathur RF	..
103	1972	Do.	Tippakkadu RF	..
104	1972	Sathanur	Poomalai RF	..
105	1972	Do.	Pinjur RF 'B' Block-East	..
106	1972	Do	Pinjur RF 'B' Block-West	..
107	1972	Do.	Ponniar RF—Sorapanandal	..
108	1972	Alangayam	Nagaluthu RF—Kottur Series IX	..
109	1973	Tiruvannamalai	Kannamadi RF	..
110	1973	Do.	Tippakadu RF	..
111	1973	Do.	Sorakolathur RF	..
112	1973	Sathanur	Poomalai RF	..
113	1973	Do.	Pinjur RF 'B' Block-East	..
114	1973	Do.	Pinjur RF 'B' Block-West	..

Proposed year for Felling and Area in Hectares.

1978–79	1979–80	1980–81	1981–82	1982–83	1983–84	1984–85	1985–86	1986–87	1987–88
(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
..	..	..	..	..	..	..	4·05	..	..
..	..	..	..	..	..	..	42·50	..	..
10·50	..	..	..	..	..	..	..	12·50	..
..	..	..	..	..	..	..	..	10·90	..
..	..	..	..	..	..	..	..	..	8·90
1[illegible]·62	..	..	..	..	..	..	..	18·62	..
..	..	..	..	..	..	..	12·95	..	..
..	..	..	..	..	..	..	27·11	..	..
..	..	..	..	..	..	..	4·45	..	..
..	..	..	..	..	..	..	10·93	..	..
75·00	..	..	..	..	..	..	..	..	75·00
8·00	..	..	..	..	..	..	..	..	8·00
40·41	..	..	..	..	..	..	..	..	40·41
8·00	..	..	..	..	..	..	..	8·00	..
21·90	..	..	..	..	..	..	..	21·90	..
16·60	..	..	..	..	..	..	..	16·60	..
35·20	..	..	..	..	..	..	..	35·20	..
..	..	..	..	..	..	..	4·45	..	..
10·00	..	..	..	..	..	..	..	10·00	..
..	70·00	..	..	..	..	..	..	..	70·00
..	42·00	..	..	..	..	..	..	..	42·00
..	8·00	..	..	..	..	..	..	..	8·00
..	17·50	..	..	..	..	..	..	..	17·50
..	26·30	..	..	..	..	..	..	..	26·30
..	36·00	..	..	..	..	..	..	..	36·00
..	..	..	..	..	..	3·64	..	..	..
..	9·30	..	..	..	..	..	..	..	9·30
..	..	75·00	..	..	..	..	..	..	..
..	..	40·00	..	..	..	..	..	..	..
..	..	9·50	..	..	..	..	..	..	..
..	..	23·20	..	..	..	..	..	..	..
	..	14·30	..	..	..	..	..	..	..
..	..	33·00	..	..	..	..	..	..	..
..	..	10·02	..	..	..	..	..	..	..
..	..	..	39·20	..	..	..	..	..	..
..		..	40·00	..	..	..	..	..	..
..		..	..	..	80·80	..	..	..	
..		..	..	..	8·00	..	..	..	
		..		22·70	..	..	.		

Serial number.	*Year of plantation.*	*Name of Ranges.*	*Name of RF Series and locality.*	*Year in which felled after 1st rotation.*
(1)	(2)	(3)	(4)	(5)
115	1973	Alangayam	Nagaluthu RF—Kottur Series X	..
116	1973	Do.	Mangalam RF—Coupe I	..
117	1974	Sathanur	Pinjur RF—'C' Block	..
118	1974	Alangayam	Mangalam RF—Coupe II	..
119	1975	Do.	Mangalam RF—Coupe III	..
120	1976	Do.	Mangalam RF—Coupe IV	..
121	1976	Do.	Nagaluthu RF	..
122	1977	Do.	Nagaluthu RF	..
123	1977	Do.	Mangalam RF—Coupe V.	..
124	1977	Do.	Jolarpet RF	..
125	1978	Do.	Mangalam RF—Coupe VI	..
126	1978	Sathanur	Ten Mudiyanur Euc. Series Coupe I. Poomalai RF	..
127	1978	Tirupathur	Govindapuram Euc. Series Coupe I Govindapuram	..
128	1978	Alangayam	Jolarpet Euc. Series Coupe I Jolarpet RF.. ..	..
129	1979	Sathanur	Ten Mudiyanur Euc. Series Coupe II Poomalai RF	..
130	1979	Tirupathur	Govindapuram Euc. Series Coupe I—Govindapuram RF	..
131	1979	Alangayam	Jolarpet Euc. Series Coupe II—Jolarpet RF ..	..
			GRAND TOTAL	..

Note —Serial No. 125 to 131 are included in the statement subject to the following of Working Plan Prescriptions in respect of **Eucalytus** planting programmes.

Propoed year for Felling and Area in Hectares.

1978–79 (6)	1979–80 (7)	1980–81 (8)	1981–82 (9)	1982–83 (10)	1983–84 (11)	1984–85 (12)	1985–86 (13)	1986–87 (14)	1987–88 (15)
..	..	..	..	19·00	..	..	..	..	..
..	..	..	9·40	..	..	..	..	..	..
..	..	..	9·60	..	..	..	..	..	..
..	..	..	..	57·50	..	..	..	..	..
..	..	..	..	10·00	..	..	..	..	..
..	..	..	..	..	8·20	..	..	..	..
..	..	..	..	..	..	8·80	..	..	..
..	..	..	..	..	..	24·00	..	..	..
..	..	..	..	..	..	..	25·00	..	..
..	..	..	..	..	..	..	9·50	..	..
..	..	..	..	..	..	..	10·00	..	..
..	..	..	..	..	..	..	..	7·30	..
..	..	..	..	..	..	..	..	10·00	..
..	..	..	..	..	..	..	..	40·00	..
..	..	..	..	..	..	..	..	8·00	..
..	..	..	..	..	..	..	..	..	10·00
..	..	..	..	..	..	..	..	..	40·00
..	..	..	..	..	..	..	..	..	8·00
338·99	209·10	217·16	177·88	186·15	173·84	430·57	422·95	422·48	422·03

Eucalyptus planting Programme.

SECTION 7—REGULATION OF REGENERATION.

Operations.

44. The species prescribed for planting are Eucalyptus hybrid for the plains and Eucalyptus citriodora for the Yelagiri Hills. Both species are fast growing, growing in a variety of soils except in highly alkaline, very shallow and very clayey soils. The species are fairly drought resistant and attain good growth in well drained deep soils. They are light demanders and normally not browsed. Since they coppice profusely, coppice regrowth can be safely relied on for regeneration of felled plantations.

45. The following measures help to enhance the growth in plantations both qualitatively and quantitatively.

(1) Clearing and thorough uprootal of all miscellaneous growth.

(2) Deep ploughing of site before planting, particularly by mechanised means.

(3) Closer planting.

(4) Timely planting, particularly planting immediately on the onset of southwest monsoon.

(5) Irrigation of plantations wherever possible.

(6) Stringent protection measures.

(7) Keeping the plantations devoid of any competing growth, particularly in the early age of the plantation.

46. A major factor on the success of some of the Eucalyptus plantations in the Division is the adoption of Kumri technique. It is superfluous to deal in detail the advantages of the technique in many respects. Even if the department has to incur expenditure on some of the preparatory works like clearing, uprootal, etc., still the benefits derieved in the ploughing of the area and maintenance of the tree crop along with the filed crop by the Kumridar is manifold. With little effort on the part of the subordinates it may be easy to canvass Kumridars for carrying out Kumri regeneration in all the series, which are selected with the main object in view.

47. *Site preparation.*—Clearfelling of the natural growth, whether departmentally or through contractor agency or Kumridar, should be completed by the end of December of the year previous to the planting year. Utilisable cut material should be sold at regular intervals as storage in the Forest for long periods would result in pilferage and theft. After removing the utilisable material, the debris will be collected, heaped and burnt in such manner as to obtain a good burn. Care should be taken to see that the burn is done away from sandal or Tamarind trees left as Reserved trees inside the coupe.

By next February or March, the uprootal work should be completed and ploughing done in April-May. By end of May aligning and staking should be completed and simultaneously pits of 30 cm. cubs dug. The espacement will be 2 metres by 2 metres in ordinary circumstances, though the District Forest Officer may increase the same for valid reasons in exceptional cases.

48. *Planting.*—Planting 4 months old container plants will be done in 30 cm. cube pits at the commencement of the south-west monsoon. Younger container plants of 4 to 5 months are supposed to establish better in adverse conditions. Before the container plants are transported to the planting site, the bags are given a soaking in water to withstand any condition of dryness in soil after planting, for a few days. To ward off attack by white ants termiticides like Aldrine or Dieldrine should be mixed with the soil of the pit before planting. The planting duration should be minimum and this work never resorted to when the soil has lost the available moisture.

49. *Nursery.*—Since the method of raising nursery is well known among the staff, it is superfluous to give full details. However, some of the salient points to be borne in mind in the raising and maintenance of the nursery are given below:—

(1) Mother beds should be sprayed soon after formation with 5 per cent D.D.T. solution or 1 per cent gammaxine solution after raking up the bed well.

(2) About 70 to 75 gms. of good sown per standard bed after mixing with fine sand and suitable insecticides such as hexidol that keep off ants and other insects. A thin, layer of straw over bamboo splits should be spread over the sown seeds. Germination commences after a week and in two to three weeks germination will be completed and then the cover is removed and high shade provided.

(3) When the seedling in beds are 4 to 6 cms. on tall, they are transplanted into polythene bags and kept under high diffused shade and watered.

(4) It is a common practice in most nurseries to fill up the polythene bags with prepared soil and keep them exposed to hot sun for long periods before transplanting the seedling from bed into the bags. This results in the tearing of bags badly. To avoid such damage to container bags, it is better to keep them watered from the time they are filled with soil.

(5) Transplanting of supressed and backward seedlings from mother beds to polythene containers should never be done and well grown seedlings obtained from the first set of germination should alone be used for transplanting. By this, the wide variation in the growing stock in the field can be eliminated to a considerable extent.

(6) Frequent grading of container seedlings should be done and this will help in transport of bigger sized seedlings for first planting and retention of smaller sized plants in the nursery for use in casualty replacements later. By that time they are likely to catch up to proper size.

(7) Eucalyptus citrodora is raised directly in containers by sowing two or three seeds per bag.

(8) Invariably seeds obtained from the Geneticist, Coimbatore should be used to ensure quality.

50. *Maintenance.*—Casualties will be replaced from August to November during the first year itself, when they are noticed. As, early planting is envisaged, casualties should be replaced in the first year itself and no need for replacing during the second year.

Two weedings and soil working are to be done in the first year in August–September and December–January. Termiticides like aldrine (Aldrex) or dieldrine (Dieldrax) will be added at the time of soil working to ward off the risk of white ant attack.

SECTION 8—OTHER REGULATIONS.

51. *Extraction of oil of Eucalyptus citriodora.*—Though the species is prescribed primarily for wood production, it yields a valuable essential oil. Extraction of the oil from the leaves is provided in the interest of fullest exploitation of the species. The practice in Australia is to extract oil from the leaves in the 4th year once and then once in 3 years. The yield of oil is reported to be 2 to 3 per cent. Best results could be obtained by setting up stills of proper size and design and departmentally distilling oil, than giving it on contract.

52. *Demarcation.*—Demarcation of plantation coupes will be done by stone slabs inscribed with Calendar year of formation, area and coupe number. Name boards will also be put at prominent places. Old coupe stones found inside the plantations will be removed.

53. *Plantation journal.*—Very often proper maintenance of plantation journals is neglected and postings are incomplete. It should be insisted that these journals are maintained properly for each series with detailed information like coupe number, year of planting, location, nature of previous growth, cost of formation and expenditure on maintenance, etc. Surveyed sketch with field book and location sketch should also find place.

54. *Closure to grazing.*—The plantation area will be closed to grazing for a period of 5 years and effective implementation of this is necessary.

55. *Fire protection.*—Fire protection will be effected by a three metre wide cut lines on the periphery, kept cleared in January–February.

56. *Seed Collection.*—There is a growing demand all over, for the seeds of different varieties of Eucalyptus. At present no serious attempt is made to collect the available seeds. Steps may be taken to collect the seeds from mature crops during the seeding season.

57. *Control forms.*—The specimen control forms to be maintained and posted at the end of each financial year is furnished in Appendix XXXVI.

58. *Inspection Paths.*—Inspection paths 2 metres wide will be formed inside the plantation running at right angles to each other so as to facilitate traversing the entire plot for inspection. In plain areas jeep tracks may be formed 3 metre wide inside the plantaion.

59. *Yield particulars.*—Every contractor should furnish monthly accounts of yield particulars of fuel collected from the coupe he is working, by weight. The form in which he should submit, will be incorporated in the agreement conditions.

CHAPTER III.

SANDAL WOOD WORKING CIRCLE.

Section 1—General Constitution of the Working Circle and Character of Vegetation.

60. The Sandalwood working circle comprises of all the Sandal bearing areas in the Division occuring in the (1) Reserved Forests, (2) Various survey fields classified as unreserves, porambokes, assessed and unassessed wastes and (3) Patta lands in the Javadis and Yelagiris where sandal grows as the property of the Government. Whole of Sathanur Range and portion of Chengam Range are excluded from the Working Circle since the Sandalwood found there are scattered and of small size and there is no scope for exploitation on an intense scale. Practically there is no sandalwood in Tiruvannamalai Range of the Division, and hence it is excluded from the circle. Separate provision has been made for annual perambalation of these areas for removal of the dead trees found therein.

61. The intensity of occurrence of Sandalwood is not the same throughout the Division as to warrant an uniform method of treatment. The species occurs in greater propotion in altitudinal zone of 700 metres to 1000 metres in Javadis. Such areas have been constituted into felling series and subdivided into coupes. The Palamarathur unreserved and the Patta lands containing sandalwood trees belonging to Government, in view of their special legal status, have been constituted in separate series called the "Village Felling Series".

Positions regarding sandal bearing tracts of unreserves.

62. Though the unreserves vest with the Panchayats concerned as per provision contained in the Tamil Nadu Panchayat Act of 1958, the Sandalwood occurring in these areas is the absolute property of the Government as per G.O. Ms. No. 1550, Rural Development and Local Administration, dated 30th May 1961 and panchayats have no rights over such trees. Hence these areas have been included in the Working Circle.

63. *Sandal on Patta-lands.*—As a measure to prevent smuggling on sandalwood from Reserved Forests by Patta Sandal merchants, Government retained to themselves the ownership of sandal trees on patta lands even after assignments. The ownership of Patta Sandal is with reference to the dates of assignment on Patta and consequently sandal growing on lands assigned on an earlier date on each hill, belongs to the Pattadar. In some cases Government have also purchased the ownership of Patta Sandalwood trees and have extracted as and when the trees are dead.

64. The category of Patta lands on which sandal grows as the property of Government are as follows:—

(i) All Patta lands in the Tenmalais (Chengam Javadis). According to G.O. No. 1497, Revenue, dated 20th May 1911. No patta were issued prior to that date.

(ii) Patta lands on the Tirupathur Javadis assigned after June 1907, according to G.O. No. 1462, Revenue, dated 10th June 1907.

(iii) Patta lands on the Yelagiris assigned after February 1918 according to Board's Proceedings Forest No. 134, Miscellaneous, dated 11th April 1918.

(iv) Patta lands from which sandal trees were purchased by Government after assignment.

65. *Enumeration of Sandal trees outside Reserved Forests.*—Special staff with one Range Officer, one Deputy Surveyor and 4 Foresters was sanctioned to carry out enumeration of sandal trees outside Reserved Forest Limits in G.O. Rt. No. 284, Forests and Fisheries Department, dated 21st March 1974. The special staff completed the work of enumeration in Tirupathur taluk and before the work could be taken up for Chengam taluk, it was disbanded for want of sanction extending their term. The enumeration details are furnished in Appendix XVII-A and XVII-B and contain particulars of number of sandal trees living and dead with girth in each survey field, proprietory rights over these trees, name of pattadars, etc., A record of this is maintained in the District Forest Office.

66. *Character of Vegetation.*—Sandal trees in this Division occur in admixture with various other species, often scattered in various densities. The platean portion of the Javadis falling within the Division is the main sandal bearing tract which has been constituted as the sandal working circle. Though certain amount of Sandal is distributed in the plains forests of Sathanur and Chengam Ranges, in view of their scattered distribution of low girth classes and poor heartwood formation, are excluded from the sandal working circle as there is no scope for intense exploitation. Any how separate provision has been made for annual perambulation of these areas for removal of dead trees found therein.

67. In view of the sepcial legal status, the patta lands and unreserves containing sandal trees belonging to Government have been constituted into separate series called village felling series, to be worked annually.

68. The intensity of occurrence of sandal wood is not the same throughout the division. The species occurs in greater proportion in altitudinal zone of 700 M to 1000 M in Javadis. Due to frequent fires the outer slopes contain little sandal. Spike disease has wiped out sandal from many a place that once contained rich sandal crop. A notible example is that of Yelagiris is which some decades back contained dense sandal but are now devoid of any sandal worth mention. In fact the sandal trees on the Yelagiri is once compared well in quality and size with those found on TenMalais. One gratifying feature is that though sandal has disappeared, in some portions of the division, the species is able to spread to fresh areas fast. Wherever protection from fire and browsing is afforded, as for example, on the plateau of Javadis, the natural regeneration is plenty. Mortality in sandal is attributable not only to spike, but also to other biotic factor like fire and drought. In fact incidence of spike seems to be on the decrease and it is hard to find spiked trees in areas once reported to be virtulently spiked, as for example, Nellivasal and Thagarakuppam.

69. From the systematic one per cent point sampling done by the Resources Survey Division during 1976, amplified to hundred per cent, the following details regarding sandal bearing and non-sandal bearing areas for ach Range of the Division where sandal exists, is arrived at and furnished below:—

Serial number	*Name of Range*	*Total sandal bearing area in hectares.*	*Total non-sandal bearing area.* in hectares.	*Total area in RF's* in hectares.
1	Tirupathur	8943	13838	22781
2.	Alangayam	7234	8371	15605
3.	Chengam	6907	18112	25019
4.	Sathanur	1853	25459	27312
	Total	24937	65780	90717

From the above, it is seen that in the above four Ranges sandal bearing areas constitute about 22 per cent of the total area of the reserved forests of the four Ranges.

The above data has to be considered with caution inview of the low per centage of the representative area to the total area for which figures are amplified. Yet this work justifies the constitution of the working circle in the first three Ranges.

70. *Distribution of area.*—The total area of the Working circle is **39,924.02 hectares of which 27,469.39 hectares** are from the Reserves and the rest from the un-reserves and survey fields as shown in the following statement.

Range	*Working circle area in hectares.* *Reserves*	 *Unreserves*	 *Survey fields.*	*Total area of working circle in hectares.*
1. Alangayam	1893.78			1893.78
2. Tirupathur	17243.23	3368.59	5245.98	25857.80
3. Chengam	8332.38		3340.06	12172.44
Total	27469.39	3368·59	9086.04	39924.02

71. *Constitution of felling series and coupes.*—Reserves, unreserves and patta fields containing sandalwood belonging to Government in exploitable quantities have been constituted into felling series and coupes. The working circle is divided into 24 felling series of which 16 are located exclusively inside reserves and the rest cover unreserves and survey fields The following statement gives details of the various felling series.

Serial number and name of felling series. (1)	*Area in hectares.* (2)	*Location.* (3)
	TIRUPATHUR RANGE.	
1 Singarapet	4,816·33	Govindapuram, Singarapet and its extension R.Fs.
2 Puliyur	2,780·88	Part of Inner Javadi R.F. and Chinnasamudram R.F.
3 Nadukuppam	1,245·62	Part of Inner Javadi R.F.
4 Thagarakuppam	832·03	Do.
5 Andiappanoor	1,909·71	Andiappanoor R.F.
6 Rajapalayam	1,628·86	Do.
7 Mottur	2,132·27	Mambakkam R.F.
8 Mambakkam	1.897·53	Mambakam and its extension

Serial number and name of felling series. (1)	*Area in hectares.* (2)	*Location.* (3)
9 Kambugudi unreserve	1,267·88	Kambugudi unreservesd excluding survey fields.
10 Pudur unreserve	2,100·71	Puliyur unreserve excluding survey fields.
11 Kambugudi village	1,537·81	Survey fields of Pungampattu Nad, excluding Vasanthapuram village.
12 Pudur village	1,927·56	Survey fields of Pudur Nad and Mambakkam unreserve.
13 Puliyur village	1,780·61	Survey fields of Nellivasal Nad.
	Alangayam Range :	
14 Vasanthapuram	1,893·78	Inner Javadi (Part) and Pungulam reserves.
	Chengam Range :	
15 Kootathur	1,911·63	Palamarathur and Tenmalai reserves.
16 Thalur	798·04	Tenmalai reserves.
17 Perumattam	825·15	Do.
18 Melpet	861·58	Do.
19 Athipet	999·98	Do.
20 Nellivoi	1,408·31	Tenmalai and Nallapattu (part) reserves.
21 Nallapattu	1,527·69	Nallapattu reserve (Part).
22 Palamarathur village	2,352’44	Unreserves and survey fields of Palamarathur and Vannankuttai enclosures.
23 Melpet village	1,025·47	Survey fields of Padapanjamarathur, Puliyur, Erukkampet, Perumattam, Chinnakilpet and Melpet enclosures.
24 Nellivoi village	462·15	Survey fields of Kilpet, Athipet, Nellivoi, Kilthattiapattu. Melthattiapattu enclosures.

72. Except for the following changes, most of the series are allowed to be continued as constituted in the previous plan of Thiru Rajasingh.

A portion of Singarapet R.F. which contains good amount of sandal, was excluded from Singarapet series in the last plan and has now been included and the boundaries of the coupes and series have been reconstituted. Adjoining the lower boundary of Mambakkam R.F. in the disreserved Nochikuttai R.F., there is a narrow strip of about 390 ha..containing natural sandal and this area has now been included in Pudur village felling series and this has been approved in Chief Conservator of Forest C.C.P. Rt. No. 2780/67, dated 8th November 1967, Kottur, Athanavur and Yelagiri village feelling series of the last Plan have now been deleted in view of the very poor sandal stocking which does not call for any intense exploitation. For the past many years there has been no sandal available for exploitation from these series. This area will be treated just like other areas which are not included in this working circle but exploited as and when dead trees are noticed in the usual perambulation.

73. The following statement shows the extent and location of coupes with their boundary descriptions in the various series

Statement of location, area and boundary description of sandal coupe in Tirupathur Division.

Serial number.	*Name of series.*	*Coupe number.*	*Name of Reserved Forest.*	*S. I. Sheet number.*	*Are a in hectares.*	*Boundary Description.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Chengam Range—					
1.	Kuttathur Sandal felling series	SC I	Palamarathur RF	1	764·84	*North* —Starts from the eastern point of 1933′ app. in Palamarathur RF runs along the Boundary line up to the point it touches the Palamarathur Reserved boundary..
						East —Runs along the common boundary between the Palamarathur Reserve Forest and Palamarathur unreserve upto the junction point where the Madal Atributary crosses the Reserved Forest boundary.
						South—From the said junction point runs along the tributary of Madal Ar till it meets the main Madal Ar River and runs towards North-east along the Madal Ar River till it meets the Timirimarathur foot path and runs along the ridges of elevation point 1869 till it meets the Reserve Forest boundary.
						West —Runs along western boundary of Palamarathur unreserve till it reaches the starting point.
		SC II	Do,	1 and 2 ..	574·65	*North*—Starting from the elevation point of 1509′ on the western boundary of Palamarathur Reserved Forest runs along Velamuchi foot path for about a length of 40 chains and then runs towards north and north-east along the ridge touching elevation point of 2,310′ app. right upto the point it meets the southern boundary of SC I and runs along towards east along the southern boundary of SC I.
						East —From the said point runs along the common boundary between Palamarathur unreserve and Palamarathur Reserved Forest upto the point it crosses Velamuchi Ar.
						South —Runs along the Velamuchi Ar towards west till it touches Vannankuttai encloseres and then towards North and West along the said enclosure till it touches the Palamarathur Reserved Forest boundary till it turns towards North.
						West —Along the Palamarathur Reserved Forest boundary to the starting point 1509.
		SC III	Palamarathur Reserved Forest Tenmalai Revenue Forest	3	572·63	*North* —Starting from a point about 6 chains from the western boundary of Tenmalai Reserved Forest along Velamuchi river runs towards east and then runs along the southern boundary of Vannankuttu enclosure and along the southern boundary of SC II till it touches the Palamarathur unreserve joint and thence along the common boundary between Palamarathur Reserved Forest and Palamarathur unreserve till Velamuchi river meets Kuttar River.

					East —On the common boundary between the Palamarathur Reserved Forest and Palamarathur unreserve along Kuttar river upto the joint where the Palamarathur Reserved Forest boundary turns in westerly direction. *South.* —Starting from the said point runs along the southern boundary of Palamarathur Reserved Forest till it reaches elevation point 2,790 and thence runs south wards along common boundary between Tenmalai Reserved Forest and Palamarathur unreservey till it crosses the Modalai Maduvu river and thence along the said river for a distance of about 60 chains. *West.* —From the said point runs in a straight line towards North touching the elevetion point 2,407 and 2,027 till it touches Velamuchi river along the same line.
2. Thalur sandal felling series..	SC I ..	Tenmalai R F.	2	380.41	*North* —Starting from elevation point of 1,289 on the western boundary of Tenmalai Reserved Forest runs along Modalai Maduvu Ar upto the point it crosses the Eastern Boundary of Tenmala Reserved Forest. *East* —From the said point runs along the common boundary between Tenmalai Revenue Forest and Palamarathur unreserve till it meets-Mottur Erukkampattu foot path and along the said path to the point till it crosses the Puliyur enclosure boundary and thence along the enclosure boundary upto the point it meets the tributory of Pelakanur Ar. *South* —From the said ponit towards west along the same tributory to a distance of 60 chans. *West.*— Thence towards north upto peak point 3,328 thence towards north 5 chains, then towards north east 32 chains then towards north west 50 chains then towards north 30 chains, then towards north west upto the peak point 1939, then, towards South-west 10 chains, thence towards west till it meets the western boundary of Tenmalai Reserved Forest and thence along the same Reserved Forest boundary upto the starting point.
Do.	SC II ..	Do	2	241.19	*North:*—Starting froma point where Mottur and Erukkam pattu footpath cuts the common boundary of Tenmalai Resrved Forest and palamarathur unreserve, the boundary runs towards east along the Reserved Forest boundary of Tenmalai Reserved Forest and Nallapattu Reserved Forest till it crosses Kuttar river. *South.*—Along the Eastern and Northern boundary of Puliyur enclosure till it meets Mottur Erukkampattu foot-path· *West:*—Along the Erukkampattu—Mottur foot-path upto the starting point.
Do.	SC III ..	Do.	283	241.19	*North:*—Starting from the south western boundary of SC I and running along the tributary of. Palakarur Ar to the point it crosses Puliyur enclosures boundary. *East:*—From the said point runnint along Puliyur enclosures boundary towards South and East wards upto the point it meats Puliyur-Erukkampattu foot-path and thence down south till it touches north East corner of Erukkampattu enclosures. *South:*—From the said point towards west and south along the Erukkampattu enclosure to the point the tributory of Pamb Ar crosses the enclosure boundary and thence towards west along the tributory of Pamb Ar upto the point it meets Pamb Ar main stream. *West:*—From the said point runs along the limits of sandal area to the elevation point of 3369 ' and runs north west and upto the starting point.

Statement of locations area and boundary description of sandal coupe in Tirupettor Division

Serial number.	*Name of series.*	*Coupe number.*	*Name of Reserved Forest.*	*S.I. Sheet number.*	*Area in hectares.*	*Boundary Description.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)
				Chengam range.		
III	Perumattam sandal felling series.	SC I	Tenmalai Reserved Forest ..	2 — 3	315·65	*North.*—Starting from the point Pamb-Ar crosses western boundary of Tenmalai Reserve Forest and almost along Pamb-Ar and thence along the tributory till it meets Erukkampattu enclosure. *East.*—From the said point runs along the western and southern side of Erukkampattu enclosure till it meets Erukkampattu Perumattam foot path, right upto the point till it meets Periyamattam enclosure boundary. *South.*—From the said point running west-wards along the Perumattam enclosure boundary, thence the boundary runs towards north-west till it meets the peak point 3405′ thence towards north to a distance of 30 chians, then towards north-west, till it cuts the tributary of Pamb-Ar and thence westwards along the point 3028′ till it meets another tributary to Pamb-Ar, and along the tributary limits of Tenmalai Reserved Forest. *West.*—From the siad point towards north along the Reserve Forest boundary to the starting point.
		SC II	Do. ..	3	200·32	*North* and *East.*—From the point Erukampattu to Perumattam foot path crosses the Erukkampattu enclosure and along the enclosure boundary upto the point Erukkampattu—Attipatti foot-path crosses the said enclosure boundary, thence along the foot-path till it enters Attipatti enclosure boundary and southwards along the boundary of said enclosure till the point it crosses Attipatti Perumattam foot-path and thence along the Korai Ar till the tributary of said river joins in the main stream at a distance of about68 chains. *South.*—Along the said tributory right upto the hill top on the boundary of Perumattam enclosure. *West.*—From the said point along the boundary of Perumattam enclosure and along Erukkampattu, Perumattam foot-path, till it meets the starting point.
		SC III	Do. ..	3	309·18	*North.*—From the point on the boundary of Puliyur enclosure where Puliyur and Erukkampattu foot-path crosses the boundary, it runs eastward along the boundary of Puliyur enclosure top of the nearby ridge and then towards south-east to the point at a distance of 50 chains. *East.*—From the said point down south to PillayarKovil and thence to Attipatti enclosure boundary and along the boundary of the said enclosure till it meets Attipatti Erukkampattu foot-path. *South.*—Along Attipatti—Erukkampattu foot-path till it crosses the Erukkampattu enclosure boundary. *West.*—Along the eastern boundary of Erukkampattu enclosure and in the same direction till it meets Erukkampattu Puliyur foot-path and thence along the foot-path to the starting point.

IV. Melpet sandal felling seri	SC I	Tenmalai Reserved Forest	2 and 4	366·65	*North.*—From the elevation point of 3,405′ running eastwards meeting Perumattam enclosure boundary. *East and south.*—Along the western boundary of Perumattam enclosure and along the Perumattam—Melpet road and thence along the northern western boundary Melpet enclosure up to south-east corner of the said enclosure thence along the Paramanandal foot-path and along the ridges 3,348′ and runs southwards where the foot-path meets Papathi Odai. *West.*—Thence the boundary runs north-west and north along the peak 3208′ (Kottikal) and 3263′ and then towards north-east to a distance of about 100 chains and thence towards north with a slight curve up to the starting point.
	SC II	Do.	2 and 3	407·52	*North.*—Starting from the south western corner of Perumattam enclosure runs along the southern boundary of said enclosure upto the hill top where the tributary of Korai Ar originates and thence along the said tributary till it joins KoraiAr main stream. *East.*—Along the Korai Ar up to the tributory to elevation near 2,570′. *South.*—From the said point westwards meeting the elevation point of 2570 and 2,779′ and 3,230′ and along the sandal limits till it joins Melpet—Pamaranandal path. *West.*—Along the Paramanandal—Melpat path and along the tributary of Korai Ar and thence along the southern eastern and northern boundary of Chinnakilpet enclosure and thence along the Chinnakilpet to Melpet foot-path and along the foot-path to Perumattam enclosure upto starting point.
	SC III	Do.	2	87·41	*North.*—Starting from the north-east corner of Melpet enclosure the boundary runs along the Melpet Chinnakilpet foot-path till it meets the Chinnakilpet enclosure. *East.*—Along the western and southern boundary of Chinnakilpet enclosure till it meets the tributory of Korai Ar. *South.*—Thence the boundary runs along the said tributary till it meets Melpet—Paramanandal foot-path and thence along foot-path leading to Melpet till it meets Melpet enclosure. *West.*—Along the eastern boundary of Melpet enclosure to the starting point.
V. Atti patti sandal felling series	SC I	Do.	3	340·34	*North.*—Starting from the point at a distance of 10 chains towards south-west to the point 3,350′ ridge it runs generally towards east till it meets Nellivoy enclosure boundary and runs along the western and southern boundaries of Nellivoy enclosure to south-east corner of Nellivoy enclosure and thence it runs northwards along the boundary of said encosure over a distance of 4 chains and thence about 6 chains towards south-east up to the sandal limits. *East.*—From the said point runs towards south touches the point 3,568′ till it meets Attipatti Kakkarasanpalayam foot-path. *South.*—From the said point runs along the Attipatti Kakkarasanpalayam foot-path towards west and meets Attipatti enclosure boundary and runs along the east and northern boundary of Attipatti enclosure.

Serial number.	Name of series.	Coupe number.	Name of Reserved Forest.	S.I. Sheet number	Area in hectares.	Boundary Description.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
						West.—From the said point and runs upwards through Pillayar Kovil and starting from a point up to the starting point.
V.	Attipatti sandal felling series—*cont.*	SC II	Tenmalai Reserved Forest ..	3	388·50	*North.*—Starting from a point where Perumattam Attipatti foot path crosses the Attipatti enclosure boundary in western side and runs along the said enclosure boundary south and east thence running along Attipatti-Kakkarasan Palayam foot path and upto the point where it meets Nellivoy foot path.
						East.—Starts from the said point and runs along the Attipatti Kakkarasanpalayam foot path upto the sandal limits where-it meets the Nellivoy SC I eastern boundary meets the Kakkarasan palayam foot path.
						South.—Meeting point of southern boundary of Nellivoy SC-I and Kakkarasanpalayam foot path, runs towards west and crosses the Ari Ar and meets top of Durgamalai 3,451′ and down south and meets Ichaluthu Ar in limits of sandal area, thence along the Ichaluthu Ar towards north-west and meets the Kilpet enclosure boundary and thence along the kilpet enclosure boundary towards north-west and runs west and joins in Korai Ar.
						West.—Runs along the Korai Ar towards north-east and meets the Attipatti enclosure boundary upto the starting point.
		SC-III	Do.	3 and 4	271,14	*North.* Starting from the junction point of Perumattam SC-II and Attipatti SC-II and runs towards south-east direction which meets the boundary line of Kilpet enclosure boundary towards west and south and meets the Ichaluthu Ar and runs along the said Ar upto the sandal limits.
						East.—From the said point runs towards the south and west along the sandal limits and meets Pudupalayam foot path thence along the foot path and tribultaory of Korai Ar upto the sandal limits where it joins again the Pudupalayam foot path and Korai Ar, tributary.
						South.—From the said point and thence along the tributary of Korai Ar towards west and meets the elevation point 2,693′ and upwards north about 20 chains and towards north-west and meets the Korai Ar.
						West.—From the said point runs along the Korai Ar towards north till the starting point.
VI	Nellivoy sandal felling series ..	SC-I	Do.	3	554·42	*North.*—Starting from a point on the eastern boundary of Nellivoy enclosure where Nellivoy to Kilthattiapet foot path crosses the Nellivoy enclosure bourdary and runs along the Nellivoy to Kilthattiapet foot path towards north-east and meets the the Kilthattiapet enclosure and runs along the said enclosure boundary towards east and joins Tenmalai Reserved Forest eastern boundary.

				East and South.—From the said point runs along the eastern boundary of Tenmalai Reserved Forest upto cairn No. 37 and then turns towards south-west upto a point 28 chains and thence towards south-east along the peak 3,588′ till it meets Nellivoy foot path and thence towards south-west to a distance of 22 chains till it crosses Kuttar Ar and thence along the said river and the peak 2,000′ in the same direction about 90 chains. Thence the boundary runs towards south-west over a distance of 35 chains till it meets Nellivoy Kakkarasanpalayam foot path. *West.*—From the said point runs along Kakkarasanpalayam Nellivoy foot path towards north along the ridge and touches the point 3,668′ and runs towards north-east and turns towards west meets the Nellivoy enclosure boundary and runs along the eastern boundary of said enclosure towards north upto the starting point.
SC-II	Tenmalai Nallapattu Reserved Forests	3	428·97	*North.*—Starting from the common boundary of Palamarathur unreserve and Nallapattu Reserved Forest near Vattaparai runs towards south-east touches the point 2,650′ upto the junction point of Paderi-Melthattiapet footpath. *East.*—From the said point runs along the Paderi Melthiattapte foot path towards south and meets the Melthattiapet enclosure boundary. *South.*—Runs along the north-west boundary of Melthattiapet enclosure boundary to a distance of 45 chains and runs towards west along a stream till it meets Puliyur-Melthattiapet foot path and thence along the said foot path and meets Puliyur enclosure boundary and thence runs along the Puliyur enclosure boundary and thence the tributary of Kuttar river and meet, the common boundary of Nallapattu-Tenmalai Reserved Forest then towards west along the said common boundary upto Karapattumalai. *West.*—From the said point runs along the common boundary of Palamarathur unreserve and Nallapattu Resetved Forest till the starting point.
SC-III	Do.	3	442‘93	*North.*—From the junction point of Paderi to Melthattiapet foot path and Malayanur-Melthatiapet foot path runs towards south-east and meets the Nallapattu Reserved Forest boundary below cairn No. 32. *East.*—From the said point runs along Nallapattu Resetve Forest boundary and Tenmalai Reserved Forest boundary upto Kil thatiapet enclosure and along the northern -western and southern-boundaries of the said enclosure and meets the Kilpathatiapee Nellivoy foot path and runs along the said foot path upto the Nellivoy enclosure boundary. *South.*—From the said point runs along the east and northern boundary of Nellivoy enclosure touches 3,368′ ridge and runs towards north-west and meets the Puliyur enclosure boundary. *West.*—From the said point Puliyur enclosre boundary and meets the Puliyur Melthattiapet foot path and thence along the said path and a stream meets Melthattiapet enclosure and thence along the said enclosure boundary till it meets the Melthattra pet-Paderi foot path and thence along the said foot path towards till the starting point.

Serial number.	Name of series.	Coupe number.	Name of Reserved Forest.	S.I. Sheet number.	Area in hectares.	Boundary Description.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
VII.	Nallapattu Sandal Felling Series.	SC-I	Nallapattu Reserved Forest ..	1 &	457·30	*North.*—Starts from the point 2,573′ Swamimalai the boundary runs along the common boundary of Palamarathur unreserve and Nallapattu Reserved Forest. *East.*—Runs along the eastern boundary of Nallapattu Reserved Forest upto 35 chains down south from the cairn No. 24 and point 2,575′. *South.*—From the said point runs towards west crosses the ridge of 2,677′ and thence towards north-west touches the point 2,724′ and meets the common boundary of Palamarathur unreserve and Nallapattu Reserved Forest.
		SC II	Nallapattu Reserved Forest ..	3	809·37	*West.*—From the said point it runs along the common boundary of Palamarathur unreserve andNallapattu Reserved Forest towards North till the starting point. *North.*—Starting from a point on the western boundary of Nallapattu Reserved Forest which is at a distance of 22 chain to peak 2,724′ the boundary runs towards south east and touches the point 2724′ and crosses the ridge 2′677′ and runs towards east till it meets the Nallapattu Reserved Forest boundary. *East.*—Runs along the eastern boundary of Nallapattu Reserved Forest upto Valakadu foot path. *South and west.*—From the said point runs along the Valakadu foot path and meets the western boundary of Nallapattu Reserved Forest and runs along the common boundary of Pallamarathur unreserve and Nallapattu Reserved Forest touches the point 2,672′, 2,062′ upto the starting point.
		SC III	Do.	3	261·02	*North.*—Starts from a point on the common boundary of Palamarathur unreserve and Nallapattu Reserved Forest where theValakadu foot path cuts the boundary, it runs along the said foot path till it meets the eastern boundary of Nallapattu Reserved Forest. *East.*—Runs along the eastern boundary of Nallapattu Reserved Forest beyond 20 chains from the cairn No. 32. *South.*—From the said point runs towards North west crosses the Melthattiapet Paderi foot path touches the point 2,650′ and meets common boundary of Palamarathur unreserve and Nallapattu Reserved Forest. *West.*—From the said point runs along the common boundary of Palamarathur unreserve and Nallapattu Reserved Forest till the starting point.
II	Palamarathur village sandal felling series.		Annually unreserves and survey fields.	1, 2 and 3	2,352·44	Unreserves and survey fields of Palamarathur and Vannankuttai enclosures.

I	X	Melpet village sandal felling series.		Annual unreserves and survey fields.	2	1025·47	Survey fields of Padapanjamarathur Puliyur Erukkampattu, Perumattam, Chinnakilpet and Melpet enclosures.
	X	Nallivoy village sandal felling series.		Do.	3	462·15	Survey fields of Kilpet, Attipatti, Nellivoy, Kilthattiapet and Melthattiapet enclosures.
				TIRUPATHUR RANGE			
I		Singarapet	SC I	Govindapuram and Singarapet Extensions Reserved Forest.	6&8	1,339·23	*North.*—Starting from the junction point of Mambakkam Reserved Forest and Govindapuram Reserved Forest along the common boundary of the above,Reserved Forests upto the trijunction point of Mambakkam Reserved Forest, Govindapuram Reserved Forest and Singarapet Extention Reserved Forest and thence along the common boundary of Mambakkam Reserved Forest and Singarapet Extension Reverved Forest up to the trijunction point of Mambakkam Reserved Forest, Singarapet Extension Reserved Forest and Puliyur unreserve. *East.*—From the above, point it runs along Singarapet Extension Reserved Forest, boundary towards south till it cuts the Pudur Nellipattu foot path. *South.*—From the above point it runs along the foot path towards west upto a ridge where the foot path bifurcates, then runs along the ridge upto the point 1835′ and thence in the same direction till it meets the common boundary of Singarapet Extension Reserved Forest and Govindapuram Reserved Forest thence upto Govidapuram Reserved Forest boundary. *West.*—From the above point it runs west wards and then north wards along the Govindapuram Reserve Forest boundary to the starting point.
		Singarapet	SC II	Singarapet Reserved Forest Singarapet Extension Reserved Forest Govindapuram Reserved Forest	8	2,104·73	*North.*—Southern boundary of SC-I and then along common boundary of Singarapet Extension Reserved Forest and Puliyur unreserve till it meets the foot path from Singarapet to Nellivasal. *East.*—From the above point it runs along the foot path towards south upto Singarapet Extension Reserved Forest Boundary. *South and West.*—From the above point it runs southwest along the Singarapet Extension Reserved Forest boundary and then Singarapet Reserved Forest boundary and again along singarapet Extension Reserved Forest boundary and then Govindapuram Reserved Forest boundary to the starting point.
		Singarapet	SC II	Singarapet Extension Reserved Forest.	8	1,372·37	*North.*—Starting from the point where the Singarapet to Nellivasal foot path cuts the common boundary of Singarapet Extension Reserved Forest andPuliyur unreserve,it runs along the Singarapet Extension Reserved Forest boundary towards east upto the trijunction point of Singarapet Extension Reserved Forest, Inner Javadi Reserved Forest and Puliyur unreserve. *East.*—From the above point it runs southwards and along the common boundary of Singarapet Extension Reserved Forest and Inner Javadi Reserved Forest upto the junction point of Singarapet Extension Reserved Forest and Inner Javadi Reserved Forest and the peak 1261.′ *South.*—From the above point it runs westwards along the Singarapet Extension Reserved Forest boundary upto the Puliyanur Ar. *West.*—Along the Singarapet Extension Reserved Forest boundary towards north till it meets the Singarapet to Nellivasal foot path thence along the above foot path upto starting point.

Serial number.	*Name of series.*	*Coupe number.*	*Name of Reserved Forest.*	*S.I. Sheet number.*	*Area in hectares.*	*Boundary Description.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)
II	**Puliyur**	SC I	Inner **Javadi Reserved** Forest ..	8	1,556·42	*North East and South.*—Starting from the Kottankallu which on the western boundary of Inner Javadi Reserved Forest boundary runs towards south and runs along the sandal limits upto theInner Javadi Reserved Forest boundary and thence along the above Reserved Forest boundary upto the junction point of Singarapet Extension Reserved Forest and Inner Javadi Reserved Forest. *West.*—From above point it runs Northwards along the common boundary of Singarapet Extension Reserved Forest and Inner Javadi Reserved Forest upto the trijunction point of Singarapet Extension Reserved Forest, Inner Javadi Reserved Forest and Puliyur unreserve and thence along the common boundary of Inner Javadi Reserved Forest and Puliyur unreserve up to the starting point.
	Puliyur	SC II	**Inner** Javadi RF and **Chinnasamudram RF.**	(Bit I) 7 and **Chinnasamudram** RF map.	616·74	*North, East and South* :—Starting from the above point about 6 chains down to KoraiAr on the south and runs along Chinnasamudram RF boundary towards south upto the sandal limit. *West* :—along the sandal limits upto the starting point.
	Do.		Do.	**(Bit II) 7 and Chinnasamudram RF map.**		*North* :—Starting from a point 1075′ app. on Manikadappai Ar in Inner Javadi RF the boundary runs along the Ar till it meets the common boundary of Inner Javadi and Chinnasamudram RF thence along the said common boundary towards south to a distance of 10 chains (along the sandal limits) and thence it runs towards east in Chinnasamudram RF to a distance of 30 chains (along the sandal limits) and runs generally towards north to a distance of 50 chains (along the sandal limits) **and thence** towards east (along the sandal limits) till it **meets the eastern** boundary of Chinnasamudram **RF.** *East* :—Thence runs along the Chinnasamudram **RF boundary** towards **south** till it meets the Valasai to **Malaitirupathur foot** path. ***South and West*** :—along the sandal **limits including a portion in the Inner** Javadi RF upto **the starting point.**
	Puliyur	SC III	Inner Javadi RF ..	7 and8	607·72	*North*:—Starting from the point **where the Periyar river cuts** the common boundary of Puliyur unreserve **and Inner Javadi** RF and along the Periyar upto the point 2300′. *East and South* :—From the above point **along the** sandal limits in Inner Javadi RF upto Eruthu-Vizhunthan parai point 3254′. *West* :—From the above point 3,254′ towards North **along** the common boundary of Inner Javadi RF and **Puliyur unreserve** upto the starting point.
III	Mambakkam.	SC I	Nambakkam RF ..	6	726·00	*North* :—Starting from a point where the foot path leading from Kurumberi to Melpet crosses the eastern boundary of Mambakkam RF the boundary runs along the sa till it leaves the eastern boundary of Mambakkam RF.

						East :—From the above point it runs southwards along the Mambakkam RF boundary up to the trijunction point of Mambakkam RF, Singarapet Extension RF and Puliyur unreserve. South and west :—From the above point it runs along the common boundary of Mambakkam RF and Singarapet extension RF till it meets the trijunction point of Mambakkam RF Singarapet Extension RF and Govindapuram RF. Thence along the common boundary of Mambakkam RF and Govindapuram RF to the end of common boundary and thence along the Mambakkam RF boundary to the starting point.
	Mambakkam.	SC II	Do.	6	504·22	North :—Starting from a point where the Kollimaduvu Ar cuts Mambakkam RF boundary it runs along the river towards south east up to the point it cuts the common boundary of Mambakkam RF and Puliyur unreserve. East :—From the above point it runs along the Mambakkam RF boundary up to the foot path leading from Kurumberi to Melpet cuts the above RF boundary. South :—Thence it runs along the said foot path till it reaches the western boundary of Mambakkam RF boundary. West :—Thence the boundary runs Northwards along the Mambakkam RF boundary up to the starting point.
	Mambakkam.	SC III	**Mambakkam Extn. RF**	6	**667·31**	North :—Starting from a point on the western boundary of Mambakkam RF which is at a distance of about 26 chain to a peak 1,505′, the boundary runs along a predominent stream and a ridge passes through peak 2,855′ till it reaches the trijunction point of Mambakkam Exten. RF and Puliyur unreserve, thence the boundary runs along the northern boundary of Mambakkam Extn. RF up to the north-east corner of said RF. East :—Thence the boundary runs along the common boundary of Mambakkam Extension RF and Puliyur unreserve till it meets the trijunction point of Mambakkam RF, Mambakkam Extension RF and Puliyur unreserve. Thence the boundary runs along the common boundary between, Mambakkam and Puliyur unreserve till it meets Kollimaduvu Ar at a distance of 15 chain (app) from a point where Mambakkam to Puliyur foot pathcuts RF boundary. South :—Thence along the Kolli Maduvu Ar till it leaves Mambakkam RF. West :—From the above point it runs along the Mambakkam RF boundary upto the starting point.
IV	**Mottur**	C I	**Mambakkam RF**	6	975·28	North and East :—Starting from the trijunction point of Andiappanur RF and Mambakkam RF the boundary runs along Jangar Ar upto the tributary branching southwards fromJangar Ar and thence along the above tributory till it cuts a foot path leading from Bommikuppam to Kilanur and thence along the foot path towards west upto a stream touches the foot path and then runs along the stream till it branches and thence along the branching stream towards the south east direction till the point 2495 and then along the ridges towards south east upto it cuts a small stream branching fromElathuOdai and then it turns its direction towards south till it cuts a foot path leading from

Serial number.	Name of series.	Coupe number.	Name of Reserved Forest.	S.I. Sheet number.	Area in hectares.	Boundary Description.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
						Bommikuppam to Pudur and a stream joins the Elathu Odai and thence along the above foot path till it meets a stream which joins Kannupuliamaram odai near 2945′ and then it runs along the stream towards south west till the stream joins the main stream of Kannupuliamaram odai and thence along the above stream till it meets a ridge near 2505′ and then run south wards along a small odai till it joins another steam. *South* :—Thence the boundary runs along the Predominent stream till it leaves the western boundary of Mambakkam RF. *West* :—Thence along the western boundary of Mambakkam RF. till it meets the starting point.
Mottur	SC II	Mambakkam R. F.		6	326·17	*North* :—Starting at a point where the foot path from Bommikuppam to Pudur, branching and leading to Molalai the boundary runs along above foot path till it cuts the western boundary of Mambakkam RF boundary. *East* :—From the above point it runs along the Mambakkam RF boundary towards south up to Molalai Hill 3518′. *South*.—From the above point it runs along a odai and then upto a ridge near 2,855 and runs along a small odai till it meets SC-I boundary. *West*.—From the above point eastern boundary of SC-I upto the starting point.
Mottur	SC III	Mambakkam Reserved Forest		6 and 7	830·82	*North and east*.—Starting from the point where the third stream branches from Jangar, it runs towards east along the common boundary of Andiappanur Reserved Forest and Mambakkam Reserved Forest till it meets the tri-junction-point of Andiappanuri Reserved Forest, Mambakkam Reserved Forest and Kambugudi unreserve and thence runs along the Mambakkam Reserved Forest boundary till it meets the trijunction point of Mambakkam Reserved Forest, Inner Javadi Reserved Forest and Kambugudi unreserve and thence along the common boundary of Mambakkam Reserved Forest and Inner Javadi Reserved Forest upto it meets the Kilanur village limits and along the Kilanur village boundary till it cuts the trijunction point of Mambakkam Reserved Forest, Inner Javadi Reserved Forest and Kilanur enclosure and then runs along the common boundary of Mambakkam and Inner Javadi Reserved Forests towards south upto it meets the trijunction point of Mambakkam Reserved Forest Inner Javadi Reserved Forest and Puliyur unreserve and thence along the Mambakkam Reserved Forest boundary towards west till it cuts the Bommikuppam Pudur foot path. *South*.—From the above point along the foot path towards west till it meets the Molalai foot path. *West*.—From the above point it runs towards north along SCI boundary upto the starting point.

V	Nadukuppam ..	SC I ..	Inner Javadi Reserved Forest ..	7	226·62	*North*.—Starting from the trijunction point of Mambakkam Reserved Forest Inner Javadi Reserved Forest and Kambugudi unreserve it runs along the common boundary of Inner Javadi Reserved Forest and Kambugudi unreserve till it meets the stream joining the Kal-Ar about 15 chains from the path and thence along the stream till it joins Kal-Ar. *East*.—From the above point it runs along Kal-Ar till it meets the common boundary of Inner Javadi Reserved Forest and Puliyur unreserves. *South*.—From the above point it runs along the common boundary of Inner Javadi Reserved Forest and Puliyur unreserve till it meets trijunction point of Mambakkam Reserved Forest, Inner Javadi Reserved Forest and Puliyur unreserve. *West*.—From the above point it runs along the western boundary of Inner Javadi Reserved Forest upto the starting point.
	Nadukuppam.	SC II Bit I	.. Inner Javadi Reserved Forest ..	7	395.78 (Bits I and II).	*North and East*.—Starting from the point a stream joins with Kal-Ar river near point 2,650′ and runs along Kal-Ar river towards north-west upto the point about 5 chains, north-east from the peak 2,500′ and thence along the sandal limits of Inner Javadi Reserved Forest till it meets the northern corner of Nadukuppam village limits and then runs along the village limits of Nadukuppam towards south-west till it meets the common boundary of Inner Javadi Reserved Forest and Puliyur unreserve. *South*.—Along the common boundary of Inner Javadi Reserved Forest and Puliyur unreserve towards west upto the Kal-Ar river *West*.—Eastern boundary of SC-I.
	Nadukuppam	SC II Bit II.	Inner Javadi Reserved Forest ..	7	..	*North*:—Starting from the extreme north western corner of the Nadukuppam village limits and runs towards east through the peak 3,048′ for a distance of about 60 chain along the sandal limits till is meets a stream. *East*.—From the above point it runs along the sandal limits towards south till it meets the river which is starting from Nadukuppam village limit and then runs towards eastern side of the enclosure. *South*.—From the above point runs along the river towards west till it meets the Nadukuppam village limits. *West*.—From the above point along the Nadukuppam village boundary towards north up to the starting point.
		SC III	Do.	7	623.22	*North*.—Starting from the south western corner of Nadukuppam village limits it runs along the bvillage boundary towards each till it meets the river starting from the Nadukuppam village limits and thence along the river upto sandal limits. *East*.—From the above river and the sandal limits it runs to the peak 2,230′. *South*.—From the above point it runs along the sandal limits towards west till it meets the Periyar and the point 2,300′ and thence along the Periyar towards west upto the Reserved Forest boundary.

Serial number.	*Name of series.*	*Coupe number.*	*Name of Reserved Forest.*	*SI sheet number.*	*Area in hec.*	*Boundaries.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)
						West.—From the above point it runs along the common boundary of Inner Javadi Reserved Forest and Puliyur unreserve up to the starting point.
VI	**Thagarakuppam**	S.C.I	Inner Javadi R.F.	7	355·31	*North.*—Starting from the point where the foot path from Rajapalayam to Kallathur crosses the common boundary of Kambugudi unreserve and Inner Javadi Reserved Forest it runs along the foot path towards south-east up to the sandal limits. *East.*—From the above point it runs towards south in the sandal limits of inner JavadiReserved Forest till it meets theKal Ar river through the peaks 3,451′ and 3,404′. *South.*—From the above point it runs along the Kal Ar and its tributory towards west till it meets the common boundary of Inner Javadi and Kambugudi unreserve. *West.*—From the above point it runs along the common boundary of Inner Javadi Reserved Forest and Kambugudi unreserved to the starting point.
	Thagarakuppam	S.C. II	Do.	5 and 7	342·36	*North and East.*—Starting from the trijunction point of Pungulam Reserved Forest Inner Javadi Reserved Forest and Kumbugudi unreserve it runs along the sandal limits of Inner Javadi Reserved Forest towards south till it meets the point 3,495′. *South.*—From the said point it runs along the stream till it joins Santhalamar-athur-Ar upto the Inner Javadi Reserved Forest limit *West.*—From the above point along the common boundary of Inner Javadi Reserved Forest and Kambugudi unreserve upto the starting point.
	Thagarakuppam	S.C. III	Do.	7	134·36	*North.*—Southern Boundary of SC II. *East.*—From the point of 3,495′ it runs along towards south west upto the point 3,444′ and then it turns towards south east along the sandal limits of Inner Javadi Reserved Forest till it meets the foot path from Rajapalayam to Kallathur. *South.*—Northern Boundary of SCI. *West.*—The once along the common boundary of Inner Javadi Reserved Forest and Kambugudi unreserve till it meets the starting point.
VII	**Andiappanur**	S.C. I	Andiappanur R.F.	4	485·62	*North and East.*—Starting from the Peak 2,925′ it runs south east along the ridge upto the peak 2,971′ and then it runs little sharp towards south-east and runs up a point five chains from the river which joins Periyar and then it runs towards south for a distance of 1 km. and then cuts stream which joins Thombuchiguddi , and then turn towards south west nearer to 2,173′ app. (about 8 chains) and the point it cuts the Andiappanur Reserved Forest boundary nearer to the peak 2,404′ (about 6 chains) and then it meets the peak 2,517′. *South.*—Thence the boundary runs north west upto peak point 2,952′. *West.*—Then the boundary runs generally northwards touching nearby enclosures and peaks 2,771′, 2,845′ app. till it meets the starting point.

	Do.	SC II	Do.	4	543.90	*North.*—Starting from the Andiappanur R.F. boundary where the second stream from the peak 1,496′ cuts theabove R.F. boundary it runs along the Andippanur R.F. boundary through the peaks 1,646′, 1,550′ till it meets the point where the foot path from Andiappanur to Naduvur crosses the said R.F. boundary. *East.*—From the said point it runs along the Periyar river till it cuts a foot-path from Andiappanur to Naduvur and thence along the sandal limits upto the tributory or Thombuchiguddai Ar and then along the Sandal limits till it meets the Andiappanur R.F. boundary. *South.*—From the above point it runs along the R.F. boundary towards west through the peaks 2,386′, 2,404′ and runs along the R.F. line to a point about 6 chains from the peak, 2,404′ and then it turns towards north west and runs along the ridges upto the point where it cuts, the Thombachiguddai Ar and Peak 2,083′. *West.*—From the above point it runs along the Eastern boundary of Andiappanur SC. I up to the point 2,971′ and then it runs along the stream to the starting point.
	Do.	SC. III	Do.	4, 5 and 7	880.19	*North.*—Starting from the junction point of Andiappanur and Pungulam R.Fs. it runs along the common boundary of Andiappanur R.F. and Pungulam R.F. upto the trijunction point of Andiapppanur R.F., Pungulam R.F. and Kambugudi unreserve. *East.*—From the said point it runs along the common boundary of Andiappanur and Kambugudi unreserve to the point it meets the peak 3,674′. *South.*—From the above point it runs along the said common boundary till it cuts the Periyar. *West.*—From the above point it runs along the Periyar till it cuts the Andiappanur R.F. boundary and thence along the R.F. boundary and towards North up to the starting point.
VIII	Rajapalayam	SC I	Andiappanur RF	4, 6	532.16	*North and East.*—Starting from the junction point where the Muttampatti footpath cuts the western boundary of Andiappnur R.F., it runs south-east in a straight line along the peak 1,684′ and then it turns towards east and turns till it meets the ridge line between the peaks 2,892′ and 2,459′ and again turns towards south and runs along, the ridges through the peaks 2,459′, 2,740′ upto the peak 2,500′ and then it turns towards south-east in staright line upto the peak point 2,560′ which is also the south-west corner of Kambugudi unreserve. *South.*—From the said point the line runs along the tributory of Jangar Ar and thence along Jangar Ar till it meets the Andiappanur RF boundary. *West.*—From the above point it runs along the western boundary of Andiappanur R.F. towards north till it meets the starting point.
	Do.	SC II	Do.	4	720.34	*North.*—Starting from the point 1,415′ in the western boundary of Andinppanur R.F. it runs along the RF boundary till it meets the point where the second tributory from the peak 1496′ in the same R.F. boundary.

Serial number.	Name of Series.	Coupe number.	Name of Reserved Forest.	SI sheet number.	Area in hec.	Boundaries.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
						East.—From the above point it runs along the tributory of Periyar upto the peak 2,917′ and then runs towards west along the ridge upto 2,915′ and then runs towards south along the peaks 2,845′,2,771′ and then runs towards south east along the peak 2,952′, and 2,892′ till it meets the north eastern corner point of S.C.I of the same series. *South.*—Northern boundary of S.C I of the same series. *West.*—Thence along the Andiappanur RF boundary starting from the point where the Muttampatti to Kambugudi foot-path cuts it and thence to the starting point.
	Rajapalayam,	SC III	Andiappanur RF	4,6	376.36	*North.*—Starting from the peak point 2,952′ it runs towards south-east in a stragiht line to the peak point 2,517′. *East.*—From the above point in runs towards south along the common boundary of Andiappanur RF and Kambugudi unreserve till it meets the corner point were the said common boundary meets the peak 2,500.′ *South.*—From the above point it runs towards north west in straight line to the peak 2,500. *West.*—From the above point itruns along the ridges 2,740′,2,459′ and 2,892 till it meets the starting point.
IX	**Kambugudi unreserve**	SC I	Kambugudi unrserve (excluding survey field).	6,7	409.14	*North.*—Starting from the point where the foot-path from Rajapalayam to Kallathur crosses the common boundary of Andiappanur RF and Kambugudi unreserve, it runs along the said foot path within, Kambugudi unreserve limits. *East and South.* From the above point it runs along the common boundary of Inner Javadi RF and Kambugudi unreserve towards the west upto trijunction point of Inner Javadi RF, Mambakkam RF and Kambugudi unreserve and thence along the common boundary of Mambakkam RF and Kambuddi unrserve till it ets the trijunction point of Mambakkam RF Andiappanur RF and Kambugudi unreserve. *West.*—From the above point it runs along the common boundary of Andiappanur RF and Kambugudi unreserve till it meets the starting point.
	Do.	SC II	Do.	4,5,6&7	591.65	*North.*—Starting from the point 2,404′ it runs along the common boundary of Andiappanur RF and Kambugudi unreserve till it cuts the foot-path from Andiappanur to Kelaiyur in the same common boundary and thence along the above foot-path till it meets the western boundary of Inner Javadi RF. *East.*—From the said point it runs along the common boundary of Inner Javadi RF and Kambugudi unreserve towards south upto the point where the said boundary crosses the foot-path from Rajapalayam to Kalathur.

						South.—Northern boundary of SC-I. *West.*—From the point at peak 2,452′ in common boundary of Andiappanur RF and Kambugudi unreserve it runs towadrs north along the said common boundary to the starting point.
	Do.	SC-III	Do.	4,	267.09	*North.*—Starting from the point 3.183′ it cruns along the common boundary of Andiappanur RF and Kambugudi of unreserve upto the trijunction point of Andiappnur, RF, Pungalam RF and Kambugudi unreserve and then along the common boundary of Pungulam RFandKambugidi unreserve till meets the trijuncion point of Pungulam RF Kembugudi unreserve and Inner Javadi RF. *East.*—From the above point it runs along the common boundary of Kambugudi unreserve and Inner Javadi RF till it meets the foot path from Andiappanur to Kelaiyur. *South.*—From the above point it runs along the foot path from the Andiappanur to Kelaiyur till it meets Andiappanur RF boundary. *West.*—Thence along the common boundary of Andiappnur RF and Kambugudi unreserve towards North till it meets the starting point.
X	**Pudur unrserve**	SC-I	Puliyur unreserve (excluding Survey fields).	6,8	687.97	*North and East.*—Starting from the point to where the road leading from Singarapet to Pudur cuts the common boundary of Mambakkam RF and Puliyur unreserve it runs along the above road towards the south till it meets Singarapet Extension RF boundray. *South.*—Thence runs along the Singarapet Extension RF bounda towards west till it cuts the foot path from Anguthu Jonai to Nellivasal. *West.*—From the above point it runs along the Singarapet Extension RF boundary till mets the Mambakkam RF boundary and thence along the Mambakkam RF boundary upto the starting point.
	Do.	SC-II	Do.	6,7,8	654.78	*North, East and South.*—Starting from the point where the footpath leading from the Kottanur to Puliyur cuts the common boundary of Inner Javavadi RF and Puliyur unreserve it runs towards south along the above common boundary to the trijunction point of Inner Javadi RF, Singarapet Extension RF and Puliyur unreserve and thence along the Singarapet Extension RF boundary till it cuts the Singarapet to Pudur forest Road. *West.*—From the above point it runs towards north along the forest road upto Puliyur and thence along the foot path leading from Puliyur to Kottanur to the starting point. (via), Kilur, Kombai, and Mundapatti.

Serial number.	Name of Series.	Coupe number.	Name of Reserved Forest.	SI sheet number.	Area in hec.	Boundaries,
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Pudur unreserve ..	SC-III	Puliyur unreserve (excluding survey fields.	6,7	757.96	*North.*—Starting from the point where the foot path from Bommikuppam to Pudur cuts its the common boundary of Mambakkam RF and Puliyur unrserve it runs along the above boundary towards north-east till it meets the trijunction point of Mambakkam RF. Inner Javadi R.F., and Puliyur unrserve and thence along the common boundary of Inner Javadi R.F. and Puliyur unreserved till it meets the foot path from Kottanur to Puliyur. *East and South.*—Thence along the said foot path (via) Mundapatti, Kombai, Kilur upto Puliyur. *West.*—From Puliyur it runs along the forest road leading to Pudur towards north till it meets Mambakkam R.F. boundary and thence along the Mambakkam R.F. boundary till it meets the trijunction point of Mambakkam R.F., Mambakkam Extension R.F. and Puliyur unreserve and thence along the common boundary of Mambakkam Extension R.F. and Puliyur unreserve upto the Molalai hill and thence along the common boundary of Mambakkam R.F. and Puliyur unreserve upto the starting. *Area in hectares.* — *Location.* Pudur VFS 1927.56 .. .. Survey field Pudur Nad and Mambakkam unreserves. Puliyur VFS 1780.61 .. Survey fields of Nellivasal Nad. Kambugudi VFS 1537.81 .. Survey fields of Pungampattu Nad excluding Vasanthapuram village.
			Alangayam Range—			
1	Vasanthapuram	S.C. I	Pungulam R.F	3 and 5	384.45	*North.*—Starting from a point where Pungulam, Vasanthapuram foot path leaves the common boundary between Pungulam and Naickanur enclosure the boundary runs along the common boundary towards east upto the trijunction point of Pungulam R.F., Inner Javadi R.F. and Naickanur enclosure. *East.*—Thence the boundary runs towards south along the common boundary between Pungulam and Inner Javadi R.F. till it meets the first ridge. *South.*—From the said ridge it runs south-west of 2,725′ Ramakalasai Guddai and then along the ridge to the peak 2,354′ app. and thence westwards till it cuts Vasanthapuram Pungulam foot path. *West.*—Thence along the Vasanthapuram, Pungulam footpath, towards north to the starting point.

Do. ..	.. S.C. II (Bit I).	Inner Javadis R.F. (part) ..	.. 3 and 5	979.33	*North.*—Starting from a point about 40 chains north of Kaliyamman Koil on the common boundary of Nayakkanur enclosure and Inner Javadi R.F. runs in a straight line eastwards on the 1621′ app. ridge till it cuts the eastern boundary of Inner Javadi R.F. *East.*—Then it runs southwards along the Inner Javadi R.F. boundary to a point about 2 chains east of 1796′ app. peak. *South.*—Then it runs south-west along tributary of Mamarathur Ar. to a distance of about 40 chains and westwards till it touches the ridge on the common boundary of Inner Javadi R.F. and Pungulam R.F. *West.*—Then it runs towards north along the common boundry of Pungulam R.F. and Inner Javadi R.F. till it meets the trijunction point of Inner Javadi R.F., Pungulam R.F. and Naickanur enclosure boundary and thence along the Inner Javadi R.F. boundary to the starting point.
Do. ..	.. S.C. II (Bit II).	Do. ..	.. 3 and 5	979.33	*North.*—Starting from the pont, Mandarakuttai foot path cuts Inner Javadi R.F. boundary and runs eastwards along the footpath for a length of 60 chains. *East.*—From the above point runs south eastwards till it cuts a tributory of Mamarathur Ar. *South.*—From the above point runs westwards along the said tributory upto the point it cuts the R.F. boundary. *West.*—From the above point runs northwards along the enclosure boundary tiol the starting point.
Vasanthapuram	.. S.C. III (Bit I).	Pungulam R.F. (part) Inner Javadi R.F. (part). ..	.. 3 and 5	530.00	*North.*—Starting from the point where Andiappanur-Kambugudi Road cuts a footpath near 1957′ app. runs along the roads to a distance of 10 chains and thence runs eastwards and northwards to the foot path leading from Balapanatham-Vasanthapuram and then runs eastwards along the said footpath to the peak-point and from the said point runs straight south on the 2877′ peak till it meets the Andiapappanur-Vasanthapuram Road thence eastwards along the said road till it meets common boundary of Pungulam R.F. and Inner Javadi R.F. Thence Northwards and eastwards along the said common boundary till meets the trijunction point of Pungulam and Inner Javadi R.F.s and Vasanthapuram village boundary. *East.*—From the said point runs southwards along the common boundary of the Inner Javadi R.F. and Vasanthapuram village enclosure to the south-west corner of Vasanthapuram enclosure. *South and west.*—From the said point runs westwards touching peak points and 2031′ thence along the tributary to Garagamandai Ar. till it meets the footpath at a distance of about 20 chains from the peak 2640′ thence along the foot-path to the starting point.

Serial number. (1)	*Name of Series.* (2)	*Coupe uumber.* (3)	*Name of Reserved Forest.* (4)	*SI sheet number.*	*Area in hec.* (5)	*Boundaries.* (6) (7)
	Vasanthapuram ..	SC III (Bit I)	Do.	3 and 5	530.00	*North.*—From the point on the foot path leading towards Kambugudi which is at a distance of about 30 chain to peak 2,275′ in Pungulam R.F. it runs towards east touching Andiappanur-Kambugudi road and thence towards south-east direction upto the point 2,733′ app. *East.*—From the point 2,733′ app. runs towards south along the common boundary of Pungulam R.F. and Inner Javadi R.F. till meets common Range boundary between Tirupathur and Alangayam Ranges. *South.*—Along the common range boundary till it meets Andiappanur-Kambugudi forest road. *West.*—From the said point it runs towards north along the said road till it meet the footpath leading to Kambugudi then along the said footpath to the starting point.

Section 2—Analysis of the crop.

74. Javadis is generally considered the home of sandal. Trees in these regions usually attain dimensions not usually found anywhere else. Trees growing in lower elevations and plains rarely attain dimensions above 50 c.m. in girth and also die early before a significant formation of heartwood is possible. The occurrence of sandal in commercial quantities is confined to the plateau of three Ranges of the Division via., Tirupathur, Alangayam and Chengam. In the past spike has over run entire sandal tract and as a result of the heavy toll taken by this disease, the bigger trees have practically been wiped out of existence. The main growing stock is of the lower girth classes only. It is rather difficult to assess whether the prospects of future sandal stocking are going to be bleak or bright. The low incidence of spike now noticed in the RFs of the Division tempts one to wonder as to whether the disease has run its course and is on its way out. After all Nature functions in a cyclic manner and one may as well hope that next turn of wheel or the next after it, may see the exit of the disease from the scene. These optimistic considerations, though sounding some what fanciful, deserve to be kept in mind if only to temper the pessimism born of frustration at our failure to solve the problem for so long.

75. The Chief Conservator of Forest, in his reference No. 2021/74D3, dated 22nd August 1974 directed all the working Plan Divisions to take up proper estimate of growing stock and stock mapping of the sandal area while revising the plan of sandal Divisions. Considering the magnitude of working involved, the time at disposal for revising the plan, insufficient staff available and above all, the meagre budget allotment, the work could be carried out for Mambakkam sandal series and coupe II of Mottur series only. Systematic strip enumeration (20 per cent) and stock mapping was done and the results of the work are discussed in detail in Chapter VI of Part I of this Plan.

76. Previously in the year 1914-15 a complete enumeration of the sandal area of the division was done by Thiru C. C. Wilson and again a stock mapping of the sandal are was carried out by Thiru A. R. Brand in 1936. Thiru Rajasingh while revising the plan, carried out a complete enumeration of three coupes only viz. Vasanthapuram coupe I, Mottur coupe II and Melpet coupe III. The Resources Survey Division carried out a systematic one per cent point sampling in the entire Division and prepared a sandal stock map which accompanies this Plan.

77. The following figures furnish the sandal growing stock as enumerated by Thiru Wilson in 1914-15 and by the Resources Survey Division in 1976 for some of the RFs of the Division.

Serial number.	*Name of RF.*	*No. of sangal trees in 1914-15 (complete enumeration)*	*No. of sandal trees in 1976-77 (1% figures amplified to 100%.)*
1.	Andiappanur	9,422	10,705
2.	Inner Javadi	72,967	100,790
3.	Mambakkam	47,343	13,875
4.	Mambakkam Extn.	1,524	90
5.	Singarapet	5,015	8,410
6.	Singarapet Extn.	10,835	12,745
7.	Jolarpet	48,313	250
8	Palamarathur	1,474	23,100
9.	Nallapattu	15,577	29,031
10.	Tenmalai	47,308	15,520

78. From the above figures it is seen that sandal stock in Mambakkam RF and its extension, Jolarpet RF and Tenmalai RF has considerably reduced while in Inner Javadi RF, Singarapet RF and Nallapattu RF there is marked improvement in growing stock.

79. Mettur Coupe II was completely enumerated in 1963 and again a 20 per cent strip enumeration was done in 1976. As per Brand's stock map (1936) this entire coupe 277 (hec.) contained dense sandal at the rate of over 50 trees per hec. In 1963 this coupe contained 1253 trees of which only 50 trees were healthy. In 1976 enumeration this coupe contained 45 healthy trees and 570 dead trees on the whole. These figures exhibit how the depletion in the growing stock of sandal has taken place in the last four decades. Recent enumeration reveals the presence of only 10 saplings of 0.15 cm. girth class. Of course this dismal state of affairs need not be taken as representative of other areas as well. as this area has been subjected to repeated fires and over grazing.

Estimation of the growing stock in RF limits its value.

80. Unless a total enumeration in all sandal bearing areas is carried out it would be rather difficult to assess correctly the growing stock and its value. Any how from the details of enumeration carried out on systematic one per cent point sampling done by the Resources Survey Division, amplified to hundred per cent, yield figures are worked out applying the average yield obtained by extraction of trees in Mambakkam SC-II during 1974-75 for each 30 cm. girth class. To allow for thickness of bark the yield figure of one lower girth class is adopted. The yield figures thus adopted for each 30 cm. girth class are as follows. (30 cm. girth class is taken as the figures available from the Resources survey Division is for 30 cm. girth class only).

Girth Class.	*Anticipated yield for each green tree in KGs*
0-15 cm	..
16-30 cm	5
31-60 cm	14·25
61-90 cm	71·05
91-120 cm	244·9
121-150 cm	428·7
above 150 cm	520·4

81. The adjoining tabular statement gives the estimated growing stock worked out on the above basis, for each 30 cm. girth class and for the different RF's of whole Division (only for RF's.).

STATEMENT OF ESTIMATED YIELD OF GROWING STOCK

Serial number and name of Range and Reserved Forests.	*Number of tree and yield*		*30 cm. girth classes.*			
	15-30 *cm.*		31-60 *cm.*		61–90 *cm.*	
	Number of trees.	*Yield in Kgs.*	*Number of trees.*	*Yield in Kgs.*	*Number of trees.*	*Yield in Kgs.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Tirupathur Range —						
1 Andiappanur	4,475	22,375·00	5,560	79,230·00	590	41,919·50
2 Inner Javadi	18,515	92,575·00	14,285	2,03,561·25	815	57,905·75
3 Mambakkam	4,655	23,275·00	7,955	1,13,358·75	1,215	86,325·75
4 Mambakkam Extension	..	..	..	..	..	..
5 Govindapuram	3,185	15,925·00	3,595	51,228·75	140	9,947·00
6 Singarapet	4,800	24,000·00	2,905	14,396·25	705	50,090·25
7 Singarapet Extension	3,335	16,675·00	7,600	1,08,300·00	1,710	1,21,495·00
8 Chinnasamudram	1,000	5,000·00	2,010	28,642·50	160	11,368·00
Total	39,965	1,99,825·00	43,910	6,25,717·25	5,335	3,79,051·25
Alangayam Range —						
9 Mangalam	2,240	11,200·00	110	1,567·50	..	..
10 Jolarpet	250	1,250·00	..	..	..	..
11 Alangayam	8,670	43,350·00	2,860	40,755·00	230	16,341·50
12 Pungulam	46,240	2,31,200·00	14,660	2,08,905·00	2,060	1,46,363·00
13 Inner Javadi	41,965	2,09,825·00	14,015	1,99,713·75	915	65,010·75
Total	99,365	4,96,825·00	31,645	4,50,941·25	3,205	2,27,715·25
Chengam Range —						
14 Palamarathur	8,030	40,150·00	12,290	1,75,132·50	2,550	1,81,177·50
15 Nallapattu	5,872	29,360·00	18,949	2,70,023·25	3,916	2,78,231·80
16 Tenmalai	4,380	21,900·00	7,240	1,03,170·00	3,065	2,17,768·25
17 Mudanai	1,700	8,500·00	560	7,980·00	..	..
18 Ravandavadi	460	2,300·00	120	1,710·00	..	..
19 Dhamaraikadu	5,330	26,650·00	2,480	35,340·00	200	14,210·00
Total	25,772	1,28,860·00	41,639	5,93,355·75	9,731	6,91,387·55
Sathanur Range —						
20 Ponniar	1,430	7,150·00	..	..	..	..
21 Valasamalai	1,645	8,225·00	1,305	18,596·25	395	28,064·75
22 Swamimalai	1,180	5,900·00	790	11,257·50	..	..
Total	4,255	21,275·00	2,095	29,853·75	395	28,064·75
Total for the division	1,69,357	8,46,785·00	1,19,289	16,99,868·00	18,666	13,26,218·80
Percentage of each girth class of 30 cm. to the total stock of sandal of sandalwood trees in division.	54·74	38·56	6·03	0·44	0·9	0·13

IN THE RESERVED FOREST

91-120 *cm.*		121-150 *cm.*		*Over* 150 *cm.*		*Total yield.*	
Number of trees. (8)	*Yield in kgs.* (9)	*Number of trees.* (10)	*Yield in kgs.* (11)	*Number of trees.* (12)	*Yield in kgs.* (13)	*Number of trees.* (14)	*Yield in kgs.* (15)
80	19,592·00	..	..	..	..	10,705	1,63,116·50
100	24,490·00	180	77,166·00	..	..	33,895	4,55,698·00
50	12,245·00	..	..	..	..	13,875	2,35,204·45
90	22,004·10	..	..	..	..	90	22,004·10
70	17,143·00	..	..	..	..	6,990	94,243·75
..	..	..	..	..	..	8,410	1,15,486·50
100	24,490·00	..	..	..	..	12,745	3,95,935·50
..	..	..	..	..	..	3,170	45,010·00
490	1,19,964·10	180	77,166·00	..	..	89,880	15,26,699·30
..	..	..	..	..	..	2,350	12,767·50
..	..	..	..	..	..	250	1,250·00
..	..	..	..	..	..	11,760	1,00,446·50
..	..	..	..	..	..	62,690	5,86,468·00
..	..	..	..	..	..	66,895	4,74,549·50
..	..	..	..	..	..	1,34,215	11,75,481·50
230	56,327·00	..	..	..	..	23,100	4,52,787·00
294	72,000·60	..	..	..	..	29,031	3,50,232·40
345	84,490·50	110	47,157·00	380	1,97,752·00	15,520	6,72,237·75
..	..	..	..	..	..	2,260	16,480·00
..	..	..	..	..	..	580	..
..	..	..	..	..	..	8,010	76,200·00
869	2,12,818·10	110	47,157·00	380	1,97,752·00	78,501	15,67,937·15
..	..	..	..	..	..	1,430	7,150
..	..	..	..	..	..	3,345	54,886
..	..	..	..	..	..	1,970	17,157·50
..	..	..	..	..	..	6,745	79,193·50
1,359	3,32,782·20	290	1,24,323·00	380	1,97,752·00	3,09,341	43,49,311·45 or 4,349 tonnes.
..	..	..	..	..	..	..	..

82. The details of enumeration carried out by the Working Plan staff in Mambakkam and its extension RFs cannot be projected to other sandal bearing areas as there is lot of imbalance in the distribution of standing growth and its yield, and they vary from series to series and even from coupe to coupe of the same series.

83. From the statement, the total estimated (yield) from the reserves of the Division is 4,349 tonnes and after allowing a deduction of 10 per cent for various deficits that might accure until the wood is weighed before delivery, the capital value is worked for the residual figures of 3,914 tonnes at the present average market rate of Rs. 53,706 per tonne. In this manner the capital value is estimated to be Rs. 21,02,05,284. This estimate is exclusive of the growing stock available in the unreserves and patta lands where sandal belongs to Government.

84. It is to be emphasised that this is at best only a rough estimate owing to the distortion caused by applying enumeration results obtained for about one per cent of the area to the entire sandal bearing areas in the RF limits.

Estimate of the capital value of growing stock in enclosures.

85. This is not worked out as the work of enumeration of all sandal trees inside enclosures and patta lands is not completed by the special staff posted for the purpose. Only Tirupathur taluk has been completed and Chengam taluk remains to be taken up. After completion of the work it would be easy to arrive at the capital value of the growing stock in enclosures and Patta fields, since girth measurements are recorded for each tree.

Section 3—Method of Treatment.

86. *Silvicultural system.*—Sandal will be exploited by the Natural selection system, according to which only dead trees irrespective of age and size will be extracted.

87. *Felling cycle.*—As in past the felling cycle will be only three years for Reserves and unreserves. But in the case of Survey fields on which sandal grows as the property of the Government, they have to be treated in a different manner since, the risk from theft is exceedingly great there. Further since the trees stand mostly in the open and close to the villages, inspections, enumeration, extraction and transport are also not difficult as in the case of reserves. Therefore such survey fields will be exploited annually. Likewise the unreserves of Palamarathur will be clubbed with the survey fields to form village felling series and exploited annually.

88. *Division into coupes.*—Each of the 16 felling series in the reserves and two felling series in the unreserves have been divided into three coupes. Permanent features like streams, foot paths or roads are defined as coupe boundaries as far as possible. The lay out of the coupes is shown in the S-I sheets and management maps accompanying this plan. Description of individual coupes and their boundaries are furnished in paragraph 73.

89. The following statement shows the length and boundary on which the artificial lines have to be cleared for each coupe.

Number and name of series. (1)	*Coupe No.* (2)	*Length to be cleared in Km.* (3)	*Location.* (4)
Tirupathur Range.			
1 Singarapet	I	4·0	North.
	II	..	..
	III	3·2	South East.
2 Puliyur	I	3·2	North East.
	II	8·0	West.
	III	8·0	East,
3 Mambakkam	I	No clearing.	
	II		
	III		
4 Mottur	I	No clearing.	
	II		
	III		
5 Nadukuppam	I	..	
	II	3·2	East.
	III	6·2	Do.
6 Thagarakuppam	I	3·2	South.
	II	5·4	East.
	III	1·8	Do.
7 Andiappanur	I	..	..
	II	4·0	East.
	III	..	..
8 Rajapalayam	I	1·0	South.
	II	..	..
	III	1·4	North.
9 Kambagudi unreserve	1, II, III	No clearing.	
10 Pudur unreserve, I, II, III	I. II, III	Do.	
11 Kambagudi village	..	Do.	
12 Pudur village	..	Do.	
13 Puliyur village	..	Do.	
Alangayam Range.			
14 Vasanthapuram	I	1·0	South.
	II	4·6	North and South.
	III	6·0	All sides.

Number and name of series. (1)	*Coupe No.* (2)	*Length to be cleared in km.* (3)	*Location.* (4)
Chengam Range.			
15 Kootathur	I	2·4	South.
	II	2·8	North.
	III	1·6	West.
16 Thalur	I	3·4	West.
	II	..	..
	III	1·6	West.
17 Perumattam	I	3·8	South.
	II	0·4	South.
	III	2·8	East and North.
18 Melpet	I	6·0	West.
	II	3·0	South.
	III	..	..
19 Athipet	I	2·4	North and East.
	II	3·2	East.
	III	3·4	South East.
20 Nellivoy	I	3·8	East.
	II	1·8	North.
	III	1·6	South.
21 Nallapattu	I II III	No clearing required.	
22 Palamarathur village		Do.	
23 Melpet village		Do.	
24 Nellivoy village		Do.	

90. **A list of localities** in the reserves outside the regular sandal working circle, where sandal trees occur but not in sufficient concentration as to justify **inclusion** in the working circle, is given separately in para 133. These areas shall be perambulated every year and all dead trees make and extracted annually.

91. *Y-ield.*—The yield depends on many natural causes and the virulence of spike since deadtrees along will be extracted. Since the onslaught of spite is not predictable nor does it follow any statistical pattern, it would be fuitile to attempt an estimation of feature yield with any pertension to accuracy. It is also not proper to apply the mortality percentage arrived at from enumeration data for the three coupes of Mambakkam sandal series to the entire sandal bearing areas of the division and work out the annual mortality rate, as there is wide variation in the density of sandal crop from locality to locality and even from coupe to coupe of the same sandal series. For example the percentage of annual morality as worked from enumeration figures is 3·51 per cent for conpe I, 1·68 for coupe II and 12·47 per cent for coupe III of Mambakkam sandal series.

The annual yield in the past from the Division has also been unsteady for any analysis or application to calculate the future yield to any degree of accuracy.

Section 4: Method of executing fettings.

92. *Regulation of working.*—The exploitation will be regulated only by area. One coupe will be worked in each felling series every year as per the sequence prescribed in the tabular statement of fellings. If for any reason any coupe is left unexploited in the year prescribed, it should be taken up for exploitation during the following year along with the coupe prescribed for that year in the same series. Postponement of exploitation for reasons like over accumulation of wood in the final cleaning depot or difficulty to carry-out operations for some reason, etc., should be strictly avoided as stock of valuable wood in the forests would bad to theft, or get exposed to fire damage, etc. A thorough enumeration and extraction of all dead trees in however difficult location they may occur, should be the main aim of every forest officer and negligence on the part of the subordinates in charge of works should be severely dealt. Frequent inspections and wider check-measurements by superior officers would eliminate chances of omissions and haphazard work by the concerned subordinates.

93. *Agency of felling.*—All operations connected with sandal extraction will be carried out departmentally only.

94. *Method of exploitation.*—Extraction will be confined to dead trees both standing and fallen including stumps, roots, fallen or broken branches. Dead trees over 8 c.m. in girth at breast height will be enumerated and uprooted. In known cases of trees of lesser girth than 8 cm. containing heartwood if any, they will also be extracted. Whether spiked or mutilated may be extracted. Extracted trees should be transported to the final cleaning depot without rough cleaning at site. Only debarking of the trees should be done at extraction site. No weighment of trees to be done at the forest depot. In the E and C Form, only details regarding breast height girth and actual length of the tree to be recorded and the acknowledgement also will be on this basis only. A list of trees with no heartwood at all (sapwood trees) will be furnished in the E and C Form by the Forest Depot keeper. The first weighment should be immediately after rough cleaning at the final cleaning depot. Rates of extraction and transport will be on the basis of girth of trees and not on the basis of weight of wood transported. Since the value of sapwood has increased, at the time of rough cleaning, all sapwood obtained should be separately weighed and brought to account.

95. The detailed procedure for enumeration and extraction, as given in the official pamplet entitled "Rules regarding selection, felling, cleaning, classification and disposal of sandalwood and the method of maintaining depot accounts and other registers" concisely known as "Sandalwood felling rules" is to be followed.

96. Though the sandalwood felling rules prescribe elaborate procedure regarding the various sandalwood operations, in practice, it is not followed strictly. Many of the forest areas bearing sandalwood have a thick mass of undergrowth and the enumerating staff have to crawl and crouch to reach trees for marking. Very often because of the difficulty to reach such spots, dead trees found in interior spots are omitted to be enumerated resulting in accumulation of valuable stock for years unextracted. Only along well trodden paths, the work is carried out perfectly.

97. In order to avoid such haphazard work the following guide lines are prescribed. Though this may involve considerable expenditure, considering the value of the produce, running to lakhs, that is likely to be left over in the forest to decay, any amount spent on a thorough combing of the forest for such perfect extraction is easily justifiable.

98. Therefore it is prescribed that every year enumeration should follow cutting of strip lines, one metre wide just to allow accessibility in a systematic manner in dense and scattered sandal areas of the year's coupe as shown in the stock map available. These lines should be 10 chains apart running east-west or north-south so that they cut the main streams at right angles as far as possible and given numbers A, B, C, etc., serially both on the map and on the ground. Wherever there is considerable concentration of dead sandal in inaccessible forests, further lines should be cut 5 chains apart at right angles to the strip lines and extended to 10 chains on either side or till it meets the adjoining strip lines to facilitate better combing of the areas. These exploratory lines may be numbered A-1, A-2, A-3, etc. Consecutively both on the ground and accompanying map showing the location of these lines. Wherever there are paths and roads existing within two or three chains of the strip lines, these may be taken advantage of and cutting of the exploratory lines at right angles to the strip lines may be dispensed with.

99. While following these prescriptions, points to be borne in mind are as follows:—

(1) All strip lines should start and end in points easily traceable on the ground such as RF lines, enclosures roads, footpaths, etc. The start as well as end must be marked on pegs driven firmly or nearby tree denoting the number line, preferably indelible ink or paint.

(2) Strip lines should be aligned properly to set bearing and should not be allowed to converge or diverge.

(3) The exploratory strip lines should not be broken in sparse or non sandal areas coming in between dense sandal areas.

(4) Only bushes to, allow easy penetration, should be cleared, no trees on strip lines should be cut.

(5) Dead trees occuring to a distance of one or two chains on either side of the strips can be easily located normally. Where there is a thick jungle containing large number of dead trees, exploratory lines as already explained may be cut and combed. The exploratory lines should be at right angles to the strip lines.

(6) Wherever there is obstruction of rock or big trees, there is no objection to shift the line a few metres on one side and continue.

(7) Enumeration list should contain the list of trees marked along each line, noting the name of strip line or the cross line along which the trees are marked.

(8) The layout of the stripline and cross lines should be noted on a sketch showing the distribution and number of the marked trees, along each line which should be submitted along with the enumeration list to the District Forest Officer, for sanction of extraction estimate.

(9) A 20 per cent check, i.e., one line for every 5 lines, should be done by the Range Officer and a 10 per cent check by the District Forest Officer or his Assistant, is indicated.

(10) During the next felling cycle, the striplines should be laid, between the strips of the present layout, to facilitate a thorough extraction of areas left uncovered.

100. As this method involves high expenditure, if for any reasons sufficient funds are not made available for carrying out this mode of operation in the entire division, such work may be limited to such coupes which are normally inaccessible and likely to be neglected in perfect enumeration and extraction.

101. *Schedule of operations*:—It is very necessary that the time schedule indicated herewith is kept up and hasty execution of works at the financial year is avoided.

Every enumerator is preceded by the cutting of strip lines as already indicated for easy perambulation. Extraction operation should start early in April and completed by October. Cutting of striplines should be some time in July-August and followed by enumeration. Special staff required for this purpose is indicated in Chapter XI.

It is only spreading out the various operations involved over a sufficiently long period of time that thoroughness in enumeration and extraction can be ensured and hasty work caused by accumulation avoided.

102. *Enumeration of trees in enclosure and patta lands.*—Dead trees enumerated and extracted from the patta lands should contain particulars of village, survey number of Patta, along with girth measurements and posted in the "Register of sandal trees in enclosures and patta" maintained in the District Forest Office.

103. *Register of Sandal trees in Enclosures and Patta Lands.*—Based on the enumeration figure collected by the special staff in enclusures and Pata lands, on register will be maintned at the Range Office and District Forest Office showing the details of sandal trees standing in enclosures and Patta lands. Details of ownership, village particulars, survey number, number of sandal trees growing on the land, measurements of girth and date of assignment etc. are furnished in the register. As and when dead trees are enumerated and removed from these area, number of trees removed together with dimension should been entered against the respective column in the respective page in red ink together with the year of removal. Such a running account will be kept and periodical checking of balance trees to be taken up towards the end of the operation.

104. The enumeration figures are available for Tirupathur Taluk as furnished in appendix No, XVII A and B but since the special staff employed have been disbanded before the work could be completed in Chengam Taluk. The full details for Chengam Taluk have not yet been gathered. As soon as the work is resumed, and completed for Chengam Taluk, this will form an important register to prevent any chances of pilferage by Patta sandalwood merchants. For this reason it is imprative that the register is maintained accurately and up-to-date

105. The territorial foresters should be made responsible for checking the correctness of trees in the field as per the list and furnishing necessary, certificates to the Range Officer.

106. There is considerable scope for improving the extraction operation. A thorough extraction and complete removal of trees and portion of trees in the forest, is, what-is required. Proper checking of the operations by inspecting officers would ensure the perfectness of the work. Saw only should be used for cutting root and billeting. Breaking or twisting the root ends should be but an end to.

Section 5—Tabular statement of fellings.

107. The following statements shows the coupe to be worked each year in the different felling Series :—

Serial number and name of the series.	*Coupe number*	*Area in hectare.*	*Year in which to be felled.*			
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Chengam Range.—						
1 Kcottathur Series	I	764·65	1979–80	1982–83	1985–86	1988–89
	II	574·65	1977–78	1980–81	1983–84	1986–87
	III	572·63	1978–79	1981–82	1984–85	1987–88
2 Thalur series	I	380·41	1979–80	1982-82	1985-86	1983-89
	II	241·19	1977–78	1980-81	1983-84	1986-87
	III	176·44	1978–79	1981-82	1984-85	1987-88
3 Perumattam series..	I	315·65	1979–80	1982-83	1985-86	1988-89
	II	200·32	1977–78	1980-81	1983-84	1986-87
	III	309·18	1978–79	1981–82	1984-85	1987-88
4 Melpet series	I	366·65	1979–80	1982–83	1985-86	1988-89
	II	407·52	1977–78	1980-81	1983-84	1986-87
	III	87·41	1978–79	1981-82	1984-85	1987-88
5 Athipet series	I	340·34	1979–80	1982–83	1985-86	1988 89
	II	388·50	1977–78	1980–81	1983-84	1986–87
	III	271·14	1978–79	1981-82	1984-85	1987-88
6 Nollivey series	I	554·42	1979–80	1982-83	1985-86	1988–89
	II	428·97	1977–78	1980-81	1983-84	1986–87
	III	424·92	1978–79	1981-82	1984–85	1987–88
7 Nallapattu series	I	457·30	1979–80	1982–83	1985-86	1988-89
	II	809·37	1977–78	1980 81	1983–84	1986-87
	III	261·02	1978–79	1981-82	1984-85	1987-88
8 Palamarathur village sandal series	..	2,352·44	Annually.			
9 Melpet village sandal series	..	1,025·47	Do.			
10 Nellivoy sandal series	..	462·15	Do.			
Tirupathur Range.—						
1 Singarapet	I	1,339·23	1979-80	1982-83	1985-86	1988-89
	II	2,104·73	1977–78	1980-81	1983–84	1986-87
	III	1372·37	1978-79	1981-82	1984–85	1987-88
2 Puliyur	I	1,556·42	1979-80	1982-83	1985-86	1988-89
	II	616·74	1977-78	1980-81	1983-84	1986-87
	III	607·72	1978-79	1981-82	1984-85	1987-88
3 Mambakkam	I	726·00	1979-80	1982-83	1985-86	1988–89
	II	504·22	1977–78	1980-81	1983-84	1986-87
	III	667·31	1978-79	1981-82	1984-85	1987-88
4 Mottur	I	975·28	1979–90	1982–83	1985–86	1988–89
	II	326·17	1977–78	1980–81	1983–84	1986–87
	III	830 82	1978–79	1981–82	1984–85	1987–88
5 Nadukuppam..	I	226·62	1979–80	1982–83	1985–86	1988–89
	II	395.78	1977–78	1980–81	1983–84	1986–87
	III	623 22	1978–79	1981–82	1984–85	1987–88
6 Thagarakuppam	I	355·31	1979–80	1982–83	1985–86	1988–89
	II	342·36	1977–78	1980–81	1983–84	1986–87
	III	134·36	1978–79	1981–82	1984–85	1987–88

Serial number and name of the series.	*Coupe number.*	*Area in hectares.*	*Year in which to be felled.*			
(1)	(2)	(3)	(4)	(5)	(6)	(7)
7 Rajapalayam	I	532·16	1979–80	1982–83	1985–86	1988–89
	II	720·34	1977–78	1980–81	1983–84	1986–87
	III	376·36	1978–79	1981–82	1984–85	1987–88
8 Andiappanur	I	485·62	1979–80	1982–83	1985–86	1988–89
	II	543·90	1977–78	1980–81	1983–84	1986–87
	III	880·19	1978–79	1981–82	1984–85	1987–88
9 Kambugudi unreserved	I	409·14	1979–80	1982–83	1985–86	1988–89
	II	591·65	1977–78	1980–81	1983–84	1986–87
	III	267·09	1978–79	1981–82	1984–85	1987–88
10 Pudur unreserve	I	687·97	1979–80	1982–83	1985–86	1988–89
	II	654·78	1977–78	1980–81	1983–84	1986–87
	III	757·96	1978–79	1981–82	1984–85	1987–88
11 Pudur village sanald series	1,927·56	Annually.				
12 Puliyur village sandal series	1,780·61	Annually.				
13 Kambugudi village sandal series	1,537·81	Annually.				
Alangayam Range.—						
1. Vasanthapuram	I	384·15	1979–80	1982–83	1985–86	1988–89
	II	979·33	1977–78	1980–81	1983–84	1986–87
	III	530·00	1978–79	1981–82	1984–85	1987–88

Section 6 : Subsidiary silvicultural operations.

108. *Artificial regeneration.*—Artificial regeneration of sandal on a small scale was carried out in the past, both by direct sowing of seeds and also by planting container plants, with little success. Only in few plantations raised in the last few years of last plan period sandal has been raised with fair amount of success. In the last plan, the technique prescribed was to clear strips 33' apart in the natural forest and along the strips, at 22 intervals sowing of seeds in prepared patches was advocated. In the later years instead of sowing seeds planting of container plants was done. As these methods failed, the current practice is to clearfell all unwanted growth, uproot, plough and plant container plants of 8 to 12 months old, in 30 cm. cube pites at 4m X 4m, under "Kumri" method. Barbed wire fencing was provided. This method has given certain amount of success.

109. In view of the large scale clearing of unreserves of the Division for cultivation in the past and consequent disappearance of sandal in stages and the increasing depletion in the growing stock of sandal in the reserves, there is an imperative need to supplement the natural regeneration by artificial means. Therefore three sandal plantation series are prescribed in the reserves. Large extent of unreserves in the division forms an ideal ground for extending regeneration operations as and when they are taken over by the Department. Already Palamarathur and Kambugudi unreserve are notified under section 26 of the Tamil Nadu Forest Act and are pending transfer to the Forest Department. Since the details of areas available for transfer and location of such areas are not available, it is left to the District Forest Officer to draw up a planting programme after the unreserves are transferred to the Forest Department and execute the same.

110. *Plantation technique* : This involves the planting of well grown container plants of sandal raised on a suitable has, in pits after completely clearing all unwanted growth uprooting of stumps, and ploughing. All economically important trees in the area inclusive of natural sandal should be left unfelled. Burning should not be done normally. If removal of the cut materials beyond the limits of the plantation area poses a problem, a careful heaping up of the cutmaterials at such places where no natural regeneration of sandal is found should be done in small quantities and a controlled burn given under the direct supervision of the forester concern. No bunning should be done anywhere near sandal growth, as this kills them outright. Since the clearing work involve no cutting of big and useful trees, the work should be done only departmentally under the supervision of the section foraster and if any saleable material is obtained, should be sold as an when sufficient quantities are accumulated. Wherever possible Kumri regeneration should be encouraged. The kumri lease will be for a period of three years on the usual conditions.

111. *Annual areas* : Annually 25 hectares will be planted, during the plan period in the localities detailed below :

1. Alangayam Range — Alangayam RF.
2. Alangayam Range — Inner Javadi RF.
3. Tirupathur Range — Mambakkam RF.

112. The following detailed statement gives the years in which each coupe is to be planted up, along with its area.

Year of planting.	Coupe No.	Area in hecs. and location.		
		Alangayam Range Alangayam RF. (Alangayam Sandal pltn. series.)	Alangayam Range, Inner Javadi. (Mantharakuttai sandal pltn. series).	Tirupathur Range Mambakkam RF. (Mambakkam sandal pltn. series.)
1978	I	10	10	5
1979	II	10	10	5
1980	III	10	10	5
1981	IV	10	10	5
1982	V	10	10	5
1983	VI	10	10	5
1984	VII	10	10	5
1985	VIII	10	10	5
1986	IX	10	10	5
1987	X	10	10	5

The regeneration coupes are marked on the accompanying maps.

113. In addition, when the unreserves of Palamarathur, Kambugudi and Puliyur are taken over by the Forest Department a planting scheme may be drawn up by the District Forest Officer and executed in proper sequence. An area of 100 ha. per annum can be tackled for sandal regeneration in addition.

114. *Regulation of regeneration operations.*—Since the areas selected are old fuel coupes and as no felling of useful trees is prescribed there is no need to offer the clearing work for sale. All natural growth of inferior species, leaving important tree crop, and all bushes, should be cleared. Natural seedling of sandal should be carefully left. Uprootal, ploughing and planting to be done as already stated. The work of clearing uprootal and burning if necessary should be completed by April and ploughing preferably with tractor if possible should be completed by May. Planting work to be completed by June-July taking advantage of the south-west monsoon. Size of pits will be 30 cm. cube.

115. *Espacement.*—An espacement of 4m x 4m will be adopted.

116. *Host species.*—Cassia siamea is a good host. In as much as most of the natural tree growth are left in the area, they will supplement the need for sufficient number of hosts for sandal.

117. *Fencing.*—One of the factors responsible for failure of sandal plantations in many areas where they have been tried in the past, is the ineffective protection from browsing by cattle afforded to the planted seedlings. There is therefore imperative need to fence the area effectively. Brushwood fencing so far tried has never been effective. Therefore either barbed wire fencing or chain link fencing to stone or concrete pillars would be the most ideal and effective one. The high cost of this item of work is really worth when compared to the return of a successful sandal plantation. This also helps in the establishment of natural sandal seedlings obtained by seed fall inside the plot. Protection to other natural growth like bamboos inside the plot is also afforded. The barbed wire fencing should be reinforced by live fence of species, like Euphorbia Species, Balsamodenron Species, etc. and after a year or two, the barbed wire fence can be dismantled and used elsewhere.

118. *Replacement of casualties.*—Since there is a fairly high mortality percentage in the sandal seedlings planted in the year of raising, atleast 50 per cent more nursery stock should be raised and casualty replacement done in October-November and also in the second year about 25 per cent replaced. Weeding and soil working should be done twice a year for two years. Since the host plant viz., Cassia siamea over grows the sandal repeated pollarding of the host plant, is absolutely necessary if at all sandal is to establish. Plantations have failed because of not keeping down the host from suppressing the sandal saplings.

Intensive cultural operation in sandal areas.

119. Sandal is not hardy enough like Teak or Eucalyptus and can be completely smothered by weeds and bushes. In many of the RFs, it is found that after a wave of spike, sandal is asserting itself and quite a lot of regeneration is found coming up under the cover of thorny bushes Such a cover in the early stage of the sandal is useful. But on account of its light demanding nature, the subsequent growth is retarded and plant struggles to grow, developing lots of kinks, etc., on account of the suppression of the light by the same bushes which afforded protection for its early growth from grazing. If large number of such sandal is freed from the bushes by clearing the bushes and making the tip of the plant free, they get a start and grow well.

120. With a view to encourage the profuse natural regeneration and also to induce natural regeneration, tending of natural crop is necessary. Tending operation consists of cutting down climbers and over hanging branches and bushes on all grown trees over one and a half metre height. This should be done at the time of marking trees for extraction in sandal coupes. Every coupe will get attention once in three years.

121. In addition, a series of tending plots in Inner Javadi RF has been marked for carrying out special tending operations on the following lines. The plots are serially-numbered and one plot for each year should be taken up from the year 1978 in the proper sequence as marked on the accompanying map. In this work is taken up and executed with all seriousness, it will help in the inducement and establishment of natural regeneration and better the yield of sandal at the time of extraction.

122. The work involves—

(1) Clearing of all the under-growth inside the plot without damaging any of the natural regeneration already found inside the plot.

(2) Cutting down of all climbers and overengins branches of other species over topping or suppressing sandal.

(3) Marking of healthy sandal trees over 30 cm. girth at breast height inside the plot with red paint, serially numbering them and recording the breast height girth and approximate height in a register to be maintained for each plot. Around each tree at a radious of 5m, interrupted trenches of 30 cm. width and 30 cm. depth to a length of one metre is dug at the onset of monsoon leaving one metre between two trenches, as continuous trenches are prone to effect the life of the tree. This induces the regeneration through root suckers.

(4) The plot should be effectively fenced alround to protect the root suckers and natural regeneration from being browsed by cattle. This protection should be afforded for a period 5 years from the year of formation. If necessary individuals fencing of root suckers and weeding and soil working to them would greatly help the seedlings.

5) Record of work done and observation made should be periodically noted in a journal maintained for the purpose.

123. Reserve war abstract of sandal plantations and natural tending plots, existing and proposed to be tackled during the plan period are furnished below:—

Serial number and name of range. (1)	*Name of R.F. and locality.* (2)	*Regenerated area in ha.* (3)	*Prescribed area in ha. during the plan period.* (4)	*Total.* (5)	*Remarks.* (6)
	Plantations.				
1 Chengam	Tenmalai R.F.	16·63	..	16·63	..
2 Chengam	Nallapattu R.F.	4·00	..	4·00	..
3 Chengam	Palamarathur R.F.	23·10	..	23·10	..
4 Tirupathur	Singarapet Extension R.F.	28·83	..	28·83	..
5 Tirupathur	Mambakkam R.F.	..	50·00	50·00	for 10 years
6 Alangayam	Pungulam R.F.	94·35	..	94·35	..
7 Alangayam	Inner Javadi R.F.	24·50	110·00	134·50	Do.
8 Alangayam	Jolarpet R.F.	9·40	..	9·40	..
9 Alangayam	Alangayam R.F.	20·00	110·00	130·00	Do.
	Total ..	220·81	270·00	490·81	
	Division—Abstract.				
1 Chengam	..	43·73	..	43·73	..
2 Tirupathur	..	28·83	50·00	78·83	..
3 Alangayam	..	148·25	220·00	368·25	..
	Grand Total ..	220·81	270·00	490·81	..
	Natural Sandal Tending Plots.				
1 Chengam	Nallapattu R.F.	40·00	..	40·00	..
2 Chengam	Palamarathur R.F.	101·40	..	101·40	..
3 Tirupathur	Mambakkam R.F.	80·00	..	80·00	..
4 Tirupathur	Andiappanur	100·80	..	100·80	..
5 Tirupathur	Govindapuram R.F.	40·00	..	40·00	..
6 Tirupathur	Singarapet Extension R.F.	10·90	..	10·90	..
7 Alangayam	Inner Javadi R.F.	126·90	100·00	226·90	..
8 Alangayam	Pungulam R.F.	12·00	Nayakaneri sandal tending plots.	12·00	..
	Total ..	512·00	..	612·00	
	Division—Abstract.				
1 Chengam	....	141·40	..	141·40	..
2 Tirupathur	....	231·70	..	231·70	..
3 Alangayam	....	138·90	100·00	238·90	..
	Grand Total ..	512·00	100·00	612·00	..

124. *Nursery.*—In spite of raising sandal nursery for years the technique has not been mastered. Heavy casualities occur in the various stages of the nursery and ultimately only about 40 to 50 per cent of the nursery stock is available for planting. The main reasons for poor results is the damping off of sandal due to over watering by the enthusiastic staff to get good seedlings. Sometimes when the beds are exposed to continuous rains for a period of two or three days, the seedlings start dying in large numbers due to damping off.

125. Some specimens of sandal seedlings sent to the Coimbatore Agricultural University reverled the presenece of the following sol fungi.

1. Rhizoctonia bataticola.
2. Thioctonia solani and
3. Fusarium species.

To combat the fungal infecing, the following suggestions are given. %—Soil drenching with Agallol one gram in one litre of waterl n Brasicol one gram ih litre of water is suggested. The seeds may also be treated with Thiram (TMTD) or captan at grams per kilograo of sed before sowing. The soil to be used for containers should be sterilized by frying before filling in bags. Farmyard manure shoum be never mixed with container soil. Application of fungicide periodically to containel plants as a prophylactic measure prevents the infectiod

126. Other precautionery steps in the nursery are as follows:—

(1) The nursery should never be under shade or tree cover. Sandal is highly sensitive to dripping effect.

(2) The container soil should be fairly porus allowing good drainage. " Norambu " soil or loamy soil mixed with fine sand should be used.

(3) During hot months, diffused high shade during mid-day would help prevention of desiccasion.

(4) Both over watering or underwatering the container plants is harmful to sandal. Watering should be discreetely restricted.

(5)During continuous rain, it is better to provide a pakka shelter to drain of the rain water from falling on the seedlings. Polythene sheet or a tapering pandal would serve purpose. This shelter should be removed when there is no rain.

(6) Sandal seeds have a dormant period of 50 to 60 days and if they are sown after this period, the germination is quick. The seeds should be soaked for a period of two to three days before sowing in bed. (Never in cow dung solution as is the practice in some Ranges).

(7) The seed beds should be formed in good loamy soils with 6 inches thick, finesand spread on top.

(8) As soon as the first set of cotyledonus leaves are noticed, seedlings from mother beds should be carefully transplanted into containers.

(9) One year old container seedlings should be used for planting out.

(10) Host plants like cassia siamea should be introduced in containers after the sandal seedlings are of 3 to 4 months old. The host plant should never be allowed to suppress sandal seedlings. Repeated cutting back of host seetlings is necessary.

Section 7 : Other Regulations.

127. *Fire protection.*—The main reason for the happy state of affairs with regard to sandal on the Javadis plateau is the effective fire protection afforded to these forests over long periods. This has not only helped the growth and spread of sandal but also has promoted the establishment of superior forest type ideal for development of sandal. The Forest Village system has greatly contributed for this better protection and deserves to be continued and made more effective.

128. *Sandal in patta lands.*—Most of the sandal growing on patta lands on the Javadis are the property of the Government. These lands are ideally suited for sandal growth. But since the sandal on these patta lands is considered to be a bindrance to the agricultural practice, the ryots use all surreptitious methods in getting rid of the existing trees while taking all possible steps against natural regeneration. The sandal trees in the extensive enclosures make a substantial contribution towards the annual yield of the division.

129. Sandal on patta lands are either sandal belonging to the pattadar or to Government with reference to date of assignment. For protection of Government trees on patta lands an incentive should be given to the pattadar by paying a fixed rate at so much per kilogram of wood obtained at the time of extraction. The rate may be arrived at and the sanction of the competent authority obtained for payment.

130. In respect of sandal trees which are the property of the pattadar and which pattadar agrees to sell to the department, payment is to be made on the basis of a actual weight of rough-cleaned wood obtained from the trees. In Coimbatore North Division payment is made at the rate of 47-1/2 per cent of the average sale price of wood at Satyamangalam. The intension is to pay the owner the market value of wood less over heads, extraction and transport charges as well as a net reduction on account of wastage due to dryage and final cleaning. Since the rate is fixed some decades ago and even since condition have changed the District Forest Officer, Tirupathur may send proposals for fixing of the percentage based on the present conditions to the competent authority and obtain necessary sanction for further payments.

131. One of the main reasons for the reluctance on part of the pattadar to sell his trees to Government is the inordinate delay in the payment by the Government from the time the consent is given by the pattadar to sell the trees, to Government. Though the private merchants offer much less for the trees, the pattadar prefers to sell to them rather than to the Government in view of the ready cash they get. Prompt payment would certainly attract the pattadars to sell the trees to Government.

132. *Register of patta sandal trees.*—The enumeration of sandal trees on patta lands in Tirupathur taluk has been completed and has to be done for Chengam taluk. A register containing all details of the patta sandal trees has to be maintained in the District Forest Office and once in three years, the trees are to be checked with reference to the register and fresh established regeneration entered with all details. Trees removed should be promptly posted and the register maintained up-to-date.

Extraction of sandal from Reserved Forests not constituted in the felling series and coupes.

133. Sandal is found distributed sparsely or of low girth class outside the working circle and their exploitation systematically is not economical. These areas will be perambulated every year and dead trees if any found will be extracted promptly, and transported to the final cleaning depot. Such areas include.

(1) Valasamalai Reserved Forest.
(2) Nathampalli Reserved Forest.
(3) Ponniar Reserved Forest.
(4) Ravandavadi Reserved Forest.
(5) Anandavady Reserved Forest.
(6) Jolarpet Reserved Forest.
(7) Mangalam Reserved Forest.
(8) Mudanai Reserved Forest.
(9) Dhamarakad Reserved Forest.
(10 Office compounds, Resthouse compounds, etc.
(11) Nagaluthu Reserved Forest.
(12) Nagaluthu Extension Reserved Forest.
(13) Mangalam Extension Reserved Forest.

134. *Retails sale of sandalwood.*—The retail sale of sandalwood at rates fixed by the Chief Conservator of Forest from time to time will be continued in District Forest Office and Chengam Range. Each piece will be serially numbered and weighed before it leaves the depot and stamped at both ends with the District Forest Officer's hammer. On each piece will be written in indelible pencil the serial number and price. The price so fixed will not be subject to reduction on account of dryage during storage.

135. *Protection.*—With the increasing price offered at the half-yearly sales, the smuggling of sandal wood from the reserved forests, Is also on the increase. The special mobile party which is sanctioned for the specific purpose of putting down sandalwood smuggling offences, may be effectively utilised for frequent raids and getting the offenders severely punished.

136. *Control forms.*—The control forms to be maintained at the District Forest Office is furnished in Appendix No. XXXVI.

CHAPTER IV.

BAMBOO WORKING CIRCLE.

Section 1: General Constitution and Description.

137. The Bamboo Working Circle will comprise of all areas where bamboos are found in workable quantity. Considering the manifold use to which bamboos are put and the increased demand for paper pulp industry, bamboos are extracted even from steep slopes and localities hitherto considered inaccessible and brought to forest depot by head loads. Hence no area containing bamboo is left out on the score that it is inaccessible and the like. This working circle also includes all bamboo plantations raised in the past successfully and plantations proposed to be raised during the period of this plan, whether as a pure crop or in admixture with other species.

138. Both species, Bambusa arundinacea and Dendorocalamus strictus occur in this Division. It is not unusual to see both species growing in the same locality. Generally Dendrocalamus strictus is found in drier localities on the outer slopes of Javadis and in pockets in plans, while Bambusa arundinacea is found in more moist localities on the plateau, particularly on stream banks. The quality of bamboos cannot be considered high, but fairly good.

139. With the coming into force in 1960 of the Madras Panchayat Act of 1958, the legal status of the unreserves of the hills has completely changed and according to section 72 (1) (a) of the said Act and clarification issued by the Government of and on, all unreserved forest still vest with the Panchayat and be administered by it, for the benefit of the concerned villages. Further in Government Memorandum No. 10299 D II/61-4, Food and Agriculture, dated 15th February 1961, the Forest Department was instructed not to include the unreserves under the prescriptions of the working plans. But steps area foot to constitute the unreserves into Reserved Forests and already Palamarathur and Kambugudi unreserve are notified under section 26 of the Madras Forest Act and for Puliyur unreserves, such notification is pending. At present the bamboo coupes falling inside the unreserves are being sold by the Forest Department without objection. Basing on the current practice the prescriptions of the plan will continue to apply to the exploitation of bamboos in the unreserves and unreserves are generally divided into separate coupes without mixing them with the Reserved Forest. Thus any decision on the status of the unreserves on a later date will not affect the layout of the bamboo-coupes of the Reserved Forests.

140. The following details furnish the unreserves and the coupes laid out in them:—

Name of unreserve.	*Bamdoo coupes on which included.*	*Range.*
(1)	(2)	(3)
1 Kambagudi	Kambagudi BC I, II and III.	Tirupathur.
2 Puliyur	Puliyur BC I, II and III.	Do.
3 Puliyur	Singarapet BC III.	Do.

141. Sporadic flowering during 1967–68 in Valsamalai Reserved Forest, Nathampalli Reserved Forest and P. Swamimalai Reserved Forest during 1970–71 in Singarapet Extension Reserved Forest and gregarious flowering in Puliyur in BC I to BC III and Mambakkam Reserved Forest during 1969–70 has taken place, Reserved Forestss BC III of Swamimalai, Nathampalli and Valasamalai were allotted during 1975–76 to paper mill for removal of dead bamboos. In as much as the deserved rest after flowering has been given to these pipes, no special prescriptions for the flowered coupe is contemplated in this Plan.

142. In the last plan there were 28 bamboo series covering an area of 72144 hectares distributed in Tirupathur, Alangayam, Chengam and Sathanur Ranges. There is no bamboo in Tiruvannamalai Range.

143. During the past 60 to 70 years of planned working of bamboos, almost every bit of bamboo areas has been worked to the point of extinction of the growing stock. Inspite of sensible prescription and elaborate contract conditions evidence of faulty working of the bamboo coupes in the past is seen in the present deplorable condition of the growing stock and a stage has reached that unless the bamboo coupes were given deserved rest from working for some years, there is every possibility of this economically important species getting wiped out of the forests of this Division. As a result, the working of all bamboo coupes was suspended for a period of six year till 1981-82. as per orders of the Chief Conservator of Forests D. Dis. 6559/74 K4 dated and January 1975 and coupes were sold upto 1974–75. Only dead bamboos were extracted by Seshasayee Paper mills from the flowered coupes of the Division in 1975–76.

Section 2—Division of the Area.

144. The total area of the working circle is 66759·11 hectares which is made up of the followog categories of area to the extent noted against each.

Category of area.	*Area in hectare.*
1. Reserved Forests	57,838·33
2. Unreserves	8,477·35
3. Existing successful plantations	368·43
4. Proposed Bamboo plantations	75·00

145. *Felling series and coupes.*—The bamboo bearing areas in the Reservd Forests and unreserves have been divided into series and each series is divided into 3 coupes. The boundaries of coupes and series have been clearly marked on the accompanying maps. The following statement gives the areas of the coupes and series.

Serial number and name of series.	*BC I*	*BC II*	*BC III*	*Total area of the aeries in hectare.*
(1)	(2)	(3)	(4)	(5)
Tirupathur Range—				
1. Andiappanur	536·61	1,411·60	1,173·59	3,121·80
2. Kambugudi	854·70	971·24	906·49	2732·42
3. Thangraakuppam	1,497·34	1,605·80	1,100·74	4,203·88
4. Mambakkam	1,995·10	1,133·12	1,271·12	4,399·34
5. Puliyur	1,541·05	1,808·94	1,498·15	4,848·14
6 Singarapet	878·17	468·63	896·78	2,243·58
7. Puliyanur	847·00	533·38	644·03	2,004·41
8. Malaitirupathur	1,040·85	783·14	1,359·75	3,138·74
9. Nadukuppam	1,014·95	1,018·59	619·98	2,653·52
Alangayam Range—				
10. Mangalam	623·22	740·58	1,096·70	2,460·50
11. Nagaluthu	925·10	882·21	1,031·95	2,839·26
12. Alangayam	2,041·24	1,333·44	1,315·23	4,689·91
13. Mandarakuttai	419·25	455·68	577·49	1,452·42
14. Pungulam	1,436·23	1,812·99	1,367·84	4,617·06
15. Nayakkanur	569·80	665·30	515·16	1,750·26
Chengam Range—				
16. Palamarathur	512·92	931·95	596·91	2,041·78
17. Bandirevu	600·58	463·77	572·23	1,636·58
18. Kallathur	645·07	383·24	924·71	1,953·02
19. Kuppanatham	310·80	347·22	246·05	904·07
20. Tenmalai Central	714·68	242·52	631·52	1,770·72
21. Tenmalai East	649·93	655·19	566·47	1,871·59
22. Nallapattu South	285·49	217·32	432'20	935·01
23. Nallapattu North	425·73	336·70	295·42	1,057·85
Sathanur Range—				
24. Valasamalai	1,679·52	698·09	708·20	3,085·81
25. Nathampalli	924·30	520·43	657·20	2,101·93
26. Swamimalai	380·40	644·67	777·00	1,802·07

146. In constituting the working circle and sub-dividing it into series and coupes, well known ridges, rivers, streams and foot paths only have been adopted for boundaries and to a large extent the coupe limits, as hitherto known, has been retained in this plan also for control easy and supervision. The area, location, and boundary description of each coupe are given in the tabular statement of fellings.

147. The series and coupes prescribed in the plan are the same as prescribed in Thiru Rajasingh's Plan except for the following changes.

(1) The coupes I to III of the Yelagiris unreserve felling series has been deleted in this plan inview of the very poor stocking and low-price obtained in the past for these coupes The unreserves are almost encroached and the little price that is offered now and then is only a ruse for the pilferage of bamboos from the adjoining reserved forests by contractors.

(2) Consequent to the formation of a 'Nature reserve' in Andiappanur RF, a part of coupe No. I of Andiappanur series of the previous plan falls within it and as per instructions regarding maintenance of 'Nature reserves' working of the area for bamboo exploitation is strictly prohibited. In view of this it has become obligatory to revise the boundaries and extent of the coupes as prescribed in the previous Plan and this has been one accordingly.

(3) There has been no demand for Palamarathur unreserve Bamboo series in the previous plan period for want of sufficient Bamboo stock. Hence this is deleted in this Plan prescriptions.

Section 3—Analysis and valuation of the crop.

148. The systematic working of the bamboo was started about 70 years ago in this Division. Rules regarding the working of the bamboos were not followed right from the early times. In the last 15 years the situation has deteriorated very rapidly. Records over 40 years old speak that the rules governing the working of bamboos were followed more in their breach than in their observance. Penalties imposed for breach of agreement conditions were not sufficient enough to stop their recurrence by the bamboo coupe contractors. The result was the near eradication of this important forest produce from the forests of the Division and a timely realisation led to the suspension of the working of all bamboo coupes for a period of 6 years from 1975, by which time; it is expect that the bamboo growing stock would recoupe to the normal growth for future exploitation.

149. A survey of the bamboo forests of the state was taken by Thiru S. John Joseph in the year 1958-59. Sample plot data collected by him for Tirupathur Division revealed the following details regarding the dispersal of clumps and culms in clumps.

Name of Range.	*No. of simple plot.*	*Average No. of clumps per ha.*	*Number of culms per clump.*		
			Max.	*Min.*	*Average.*
(1)	(2)	(3)	(4)	(5)	(6)
1 Sathanur ..	18	121	23	2	7·3
2 Chengam ..	12	88	12	4	8·6
3 Tirupathur.	15	58	7	2	4·7

150. At the time of the preparation of the last Working Plan Thiru Raja Singh who laid several sample plots in 1961-62 for the collection of statistics, remarked that it was hard to see 3 to 4 culms per clump, in any parts of these forests, even after 2 years of supposed rest period. Again 1975 he Conservator of Forests, Salem circle has remarked that the bamboo clump is nothing more than a spherical bush with no culms at all in it any where in the forest. This is just to illustrate how during the course of in 15 or 20 years the growing stock of bamboo was reached a point of no return.

151. Both the species of bamboos occur as a maxture in the Division and are not exclusive in their distribution over any compact block of considerable extent. But depending on the topography and the micro climatic factors of the terrain, the proportion of one species is found to be considerably more than the other in particular localities.

152. Based on the one percent point sampling carried out by the Resources Survey Division, a combined sandal and bamboo stock map has been prepared for the whole division and accompanies this plan.

153. The extent of natural regeneration of bamboo is found to vary from place to place, the most inhabiting factor in this respect being, grazing. A striking example of how bamboo flourishes, if proper effective protection is given, can be seen in the 1975 sandal regeneration area in Mandarakuttai which is effectively fenced with barbed wire and bamboo growth there, is excellent.

154. It has not been possible to enforce closure of the flowered areas to grazing on account of practical difficulties, however much such a measure was found to be desirable and necessary, silviculturally.

Section 4—Method of treatment.

155. ***Silvicultural system*****:—The prevailing silvicultural system of selection thinning of clumps consisting of removal of individual mature culms in accordance with the felling rules will be continued.**

156. *Felling cycle.*—From past experience and experiments it has already been decided that a felling cycle of 3 years is the optimum both for silvicultural as well as administrative view points. Working on a shorter felling cycle will lead to over working and consequent deterioration of the crop while longer rotation on the other hand will cause over crowding and congestion in the crop. Hence a felling cycle of 3 years is prescribed.

157. *Regulation of working.*—The regulation of working will be by area. Each series is divided into 3 coupes with boundaries along permanent, readily distinguishable natural features like ridges, spurs, streams beaten tracks, foot paths etc., a full description of which is furnished in paragraph 170.

158. As already indicated, a period of 6 years rest from 1975-76 is given to the bamboo coupe working. As per the current orders, the resemption of working bamboo coupes will be from 1981-82 on the presumption that the rest period would be sufficient to allow working of the bamboo coupes without detriment to the bamboo stock. As a precautionary measure it is prescribed that the bamboo areas should be gone over in detail in 1980 and a decision taken in consultation with the conservator of Forests to resume or not and orders of the Chief Conservator of Forests obtained accordingly.

159. *Sale Unit.*—The coupe will form the unit of lease. If there is no demand for the coupe in a particular year, it will be considered as unsaleable and will not be offered for sale in the next year. It will be worked again according to its next turn in the sequence of fellings. Period of lease will be from 1st April to 31st March or from the date of agreement to 31st March.

Section 5—Method of executing fellings.

160. *Agency of exploitation.*—The bamboo forests of this division are to be worked to fulfil the dual obligation of supplying bamboos to the various markets depending on these markets and at the same time feeding a paper industry. The former objective is realised by engaging in the contractor's agency for felling coupes set apart for public supply. In case of coupes earmarked for meeting public demand, exploitation will invariably be through the agency of contractors by sale in open auction.

161. The supply of bamboos to the paper mill at Pallipalayam will be most efficient accomplished by allotting entire coupes exclusively to the mill for exploitation by it. Departmental exploitation of bamboo coupes may be tried as a last resort only if all other methods of attempting to discharge the obligation of the department towards paper milll supply, have failed.

162. *Allotment of coupes and target for mill supply.*—It is better to allot coupes of the same series during a particular period of 3 years continuously as this will provide the proper incentive to the mill to make the necessary investment for the development of the extraction path, etc., as they can hope to get a sufficient return for the investment by way of added facilities for extraction of the produce for the series as a whole for a period of 3 years.

Consistent with the quota of bamboo to be supplied to the paper mill in a year, and based on the estimated yield of the coupes, coupe will be allotted for mill supply and public consumption. Past performance of the coupes will be borne in mind while arriving at the estimated yiled.

163. *Exploitation of plantations.*—There are few successfully raised baboo plantations in the division and most of them have been
partmentally exploited in the past atleast once. These plantations will contiinue to be worked departmentally on a three year felling cycle
per the tabular statement felling prescribed. Plantations proposed to be raised during the plan period will not be exploited
ore they are ten years old and hene the rescriptions are not made for their felling in this Plan.

year of departmntal extraction revernue realised, present conditions of plantat n s, netc-
fobal hest of mbopl antations raised,
fse n64 Lidur below:—

Detailed list of Bamboo Plantations in Tirupathur Division

Serial number.	Year.	Name of range.	Locality with R.F.	Area in ha.	Cost of raising including maintenance cost up to 1975–76.	Year of departmental extraction.	Revenue realised.	Present condition.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	1961	Sathanur	P. Swamimalai RF	12·14	773·30	..	..	Failure.	Not traceable.
2	1961	Chengam	Anandavadi RF	12·14	1,795·31	..	..	Do.	Do.
3	1961	Do.	Palamarathur	12·14	1,412·61	..	..	Do.	Do.
4	1961	Do.	Do.	12·14	972·51	..	..	Do.	Do.
5	1961	Do.	Nallapattu RF North	12·14	1,188·27	..	..	Do.	Do.
6	1961	Do.	Nallapattu RF South	12·14	1,204·16	..	..	Do.	Do.
7	1961	Alangayam	Mangalam RF	12·14	1,827·83	..	..	Do.	Do.
8	1961	Do.	Pungulam RF	12·14	1,593·34	..	..	Do.	Do.
9	1961	Do.	Inner Javadi RF	12·14	359·26	..	..	Do.	Do.
10	1961	Do.	Mandarakuttai	12·14	1,565·80	..	..	Do.	Do.
11	1962	Sathanur Chengam	P. Swamimalai RF	12·14	1,976·36	..	..	Do.	Do.
12	1962	Chengam	Anandavadi RF	12·14	1,405·26	..	..	Do.	Do.
13	1962	Do.	Palamarathur RF	24·48	2,578·24	..	..	Do.	Do.
14	1962	Do.	Nallapattu RF North	12·14	1,455·32	..	..	Do.	Do.
15	1962	Do.	Nallapattu South RF	12·14	1,338·86	..	..	Do.	Do.
16	1962	Alangayam	Jolarpet RF	12·14	1,268·71	1972–73	7,045·00	60 per cent.	
17	1962	Do.	Pungulam RF	12·14	1,473·74	1975–76	16,737·00	Failure	planted with Eucalyptus
18	1962	Do.	Inner Javadi RF —Mandarakutti	12·14	1,814·55	..	..	Failure.	Do.
19	1962	Do.	Naickanur	12·14	1,433·51	..	..	Do.	Do.
20	1963	Sathanur	P. Swamimalai	18·21	3,944·36	..	..	Do.	Not traceable
21	1963	Chengam	Anandavadi R.F.	23·48	3,480·47	..	..	Do.	Area handed over to State seed farm.
	1963	Do.	Mudanai RF.	35·21	7,241·81	1973	4,365·00	40 per cent.	
	1963	Alangayam	Jolarpet RF	10·93	1,861·89	..	..	50 per cent.	
	1963	Do.	Kalrapatti R.F.	23·48	4,457·05	..	..	40 per cent.	

25	1963	Do.	Pungulam RF	12·14	2,028·15	..	..	Failure ..	Planted with Eucalyptus.
26	1964	Sathanur	P. Swamimalai RF	14·57	3,586·68	..	..	Do.	Do.
27	1964	Chengam	Anandavadi RF	36·02	7,778·96	..	..	..	Area handed over to State Seed Farm.
28	1964	Do.	Mudanai RF	19·83	3,192·26	..	..	35 per cent.	
29	1964	Alangayam	Jolarpet RF	13·10	971·97	..	..	50 per cent.	
30	1964	Do.	Kalrapatti RF	24·28	6,242·24	..	..	Failure ..	Planted with Eucalyptus.
31	1964	Alangayam	Pungulam RF	13·10	2,253·27	..	..	Failure ..	Planted with Eucalyptus.
32	1965	Sathanur	P. Swamimalai RF	12·54	1,848·86	..	..	30 per cent.	
33	1965	Do.	Pinjur RF 'C' Block	4·05	189·00	..	..	30 per cent.	
34	1965	Alangyam	Nagaluthu RF and Mangalam Extension RF	11·30	3,735·54	..	..	Failure. ..	Planted with Eucalyptus.
35	1065	Do.	Narasingapuram RF	59·09	24,252·55	..	..	Do.	Do.
36	1965	Do.	Kalrapatti RF	29·14	9,979·88	..	..	Do.	Do.
37	1966	Sathanur	P. Swamimalai RF	18·61	1,848·86	..	..	30 per cent.	
38	1966	Do.	Pinjur RF 'C' Block	10·93	2,844·75	..	..	35 per cent.	
39	1966	Do.	Ponniar RF Thandrampet	16·19	3,841·68	..	..	40 per cent.	
40	1966	Chengam	Melchengam RF	14·16	3,299·05	..	..	..	Area handed over to state Seeds Farm.
41	1966	Alangayam	Jolarpet RF	39·66	3,980·22	..	..	30 percent.	
42	1967	Chengam	Tenmalai RF	21·03	5,848·01	..	..	Failure.	
43	1967	Alangayam	Jolarpet RF	39·66	5,143·82	..	..	25 per cent.	
44	1968	Sathanur	Ponniar RF—Thandrampet	38·04	18,702·26	..	..	40 per cent.	
45	1968	Alangayam	Jolarpet RF	42·50	8,704·02	..	..	25 per cent.	
46	1969	Sathanur	Ponniar RF—Thandrampet Bit I	12·95	28,127·07	..	..	30 per cent.	
			Do. Bit II	27·11					
47	1971	Alangayam	Nagaluthu RF—Kottur Series	9·3	1,235·76	..	..	Failure ..	Planted with Eucalyptus.
	1972	Do.	Do.	10·02	2,707·97	..	..	Do.	Do.
49	1973	Do.	Do.	9·40	2,944·20	..	..	Do.	Do.

165. Statement showing Reserve-War details of Bamboo plantations existing and proposed to be raised during the period of the plan for each Range.

Serial number.	*Name of Range.*	*Name of R.F. and Locality.*	*Regeneration area in ha.*	*Prescribed area in ha.*	*Total.*	*Remarks.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Sathanur	P. Swamimalai R.F.	31·15	..	31·15	..
2	Do.	Ponniar R.F.	94·29	..	94·29	
3	Do.	Pinjur R.F. 'C' Block	14·98	..	14·98	
4	Chengam	Mudanai RF.	55·04	..	55·04	..
5	Tirupathur	Mambakkam Extension RF.	..	75·00	75·00	..
6	Alangayam	Jolarpet RF.	149·49	..	149·49	..
7	Do.	Kalrapatti RF	23·48	..	23·48	..
		Total ..	368·43	75·00	443·43	

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1	Sathanur	140·42	..	140·42
2	Chengam	55·04	..	55·04
3	Tirupathur	..	75·00	75·00
4	Alangayam	172·97	..	172·97
	Total ..	368·43	75·00	443·43

166. *Felling Rules.*—The following felling rules are prescribed :—

(1) Culms less than one year old shall not be felled.

(2) A minimum of 6 mature culms over one year shall be left unfelled in each clump.

(3) Immature clumps shall not be worked, Immature clump will be those with freshly sprouted culms much thinner in size than the normal mature culmp of the species.

(4) Felling should be done as far as possible on the side of the clumps opposite to that from which the largest number of new culms appear.

(5) Unfelled culms should be left standing evenly distributed over the clump.

(6) Culms should be cut clear and as low as possible between the first and second nodes from the ground level.

(7) No culm should be moved with the rhizome.

(8) Fully or partially cut bamboo shall not be left unremoved in the clump.

(9) Due to natural reasons, no new culms are produced in the clump in a year, at least half the number of old culms in a clump should be retained.

(10) Culms or clumps in flower should be cut only after seeding has taken place.

(11) Fellings should be supervised by the lessee or his authorised agent.

167. It is of utmost importance to ensure that the felling rules are rigidly enforecd and violation of any of the conditions severely penalised. Absence of the contractor or his agent in the coupe under working should never be viewed lightly, this has led to the indiscriminate felling outside the coupes and violation of other agreement conditions.

168. Regarding exploitation of bamboo plantations, it is absolutely necessary, that the work should be personally supervised by a subordinate not lower than a forester in rank and felled culms are numbered both on the stem portion and on the stump portion of each culm and clumps are given separate serial numbers . A record of culms removed from each clump should be maintained to check illicit fellings on later date.

169. The felled materials should be disposed of green as they will fetch better prices. For this purpose advance sale notice noting the anticipated yield in various classes may be mentioned in the sale notice. Often it is better to transport and sell either in Range Officer's Head-Quarters or District Forest Officer's Headquarters which are usually towns and will attract local bamboo merchants.

Section 6—Tabular statement of fellings of Bamboo Coupes.

170. After the specified period of rest of 6 years from 1975–76 if the condition of bamboo crop is found satisfactory after detailed inspection, further working coupes will start from the year 1981–82, on a 3 year felling cycle. On this presumption a tabular statement of felling with detailed description of boundaries of the coupe is furnished below :—

Statement of location, area and boundary description of bamboo coupes in Tirupathur division.

Serial number.	Year of felling.	Name of coupe.	Number of coupe	Area in ha.	Location.	Boundaries.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
				Tirupathur range.		
1	1981–82 1984–85	Andiappanur	I	536·61	Andiappanoor Reserved Forest.	*North.*—Starting from the point where the Andiappanur to Chinnavattanur foot path cuts the northern boundary of Andiappanur Reserved Forest, it runs along above Reserved Forest line towards east and then it turns towards north and runs towards north and runs upto the point where the Periyar river and Andiappanur-Nadur foot path cuts the Reserved Forest boundary. *East.*—From the said point it runs along the Periyar river towards south till the point where the above river cuts the southern boundary of Andiappanur Reserved Forest. *South.*—From the said point it runs along the common boundary of Andiappanur Reserved Forest and Kambugudi unreserve towards west till it meets the point where the Andiappanur—Chinnavattanur foot-path cuts the southern boundary of Andiappanur Reserved Forest. *West.*—From the said point it runs along the Andiappanur-Chinnavattanur foot-path towards north up to the starting point.
	1982–83 1885–86	Do.	II	1,411·60	Do.	*North.*—Starting from the point where the Kurichilapet-Kodagumalai foot-path cuts the western boundary of Andiappanur Reserved Forest it, runs along the western boundary towards east till it meets the point where the Andiappanur-Chinnavattanur foot-path cuts the northern boundary of the above Reserved Forest. *East.*—Western boundary of Andiappanur BC I. *South.*—From the point where the Andiappanur Chinnavattanur foot-path cuts the southern boundary of the Andiappanur Reserved Forest, it runs along the Reserved Forest boundary towards south-west up to the point where the Rajapalayam—Kandalanur foot-path cuts the Reserved Forest boundary. Thence along the Andiappanur—Kandalanur foot-path up to Javadi Veerappan koil 2,459. *West.*—Thence it runs through ridges 2892,′ 2952,′ 3169,′ 2735′ till it touches the eastern boundary of Kodagumalai enclosure. Then the Kodagumalai to Kurchilapet foot-path up to the starting point.
	1983–84 1986–87	Do.	III	1,173·59	Do.	*North.*—The Kurichilapet to Kodagumalai foot-path up to Kodagumalai enclosure boundary. *East.*—Thence along the enclosure up to the point 2735,′ ridges 3169,′ 2952,′ and 2892′ up to the point where it cuts the Rajapalayam to Kandalanur foot-path and thence along the said foot-path to the eastern boundary of the reserve. *South.*—Thence along the Andiappanur Reserved Forest boundary up to the point where Jangar river cust the western boundary of the reserve.

Serial number.	Year of felling.	Name of coupe.	Number of coupe.	Area in ha.	Location.	Boundaries.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
					Tirupathur Range—cont.	
						West.—The western boundary of the reserve up to the point where it cuts the Kurichilapet to Kodagumalai foot-path.
2	1981–82 .. 1984–85 ..	Kambugudi	I	854·70	Kambugudi unreserve ..	The North eastern portion of Kambugudi unreserve lying to the north of the foot-path leading from Chinnavattanur to Kallathur touching Rangasamudram and Thagarakuppam.
	1982–83 .. 1985–86 ..	Do.	II	971·24	Do. ..	The Central portion of Kambugudi unreserve lying to the north of Rajapalayam to Kallathur foot-path touching Thagarakuppam and lying to the west of the foot-path leading from Chinnavattanur to Kallathur touching Rangasamudram and Thagarakuppam.
	1983–84 ..	Do.	III	906·49	Do. ..	The southern portion of Kambugudi unreserve lying to the south of the footpath leading from Rajapalayam to Kallathur (via)Thagarakuppam.
3	1981–82 .. 1984–85 ..	Thagarakuppam	I	1,497·34	Inner Javadi Reserved Forest.	The Central portion of Inner Javadi Reserve lying between the stream that runs from Nadukuppam towards Thurinjikuppam (via) Dindampattu in south and the Kal Ar in the north falling into Cheyyar river.
	1982–83 .. 1985–86 ..	Do.	II	1,605·80	Do. ..	The Central portion of Inner Javadi reserve lying between the Kal Ar in the south and the foot-path leading from Palayapalayam to Kelaiyur in the north.
	1983–84 .. 1986–87 ..	Do.	III	1,100·74	Do.	The part of Inner Javadi Rrserved Forest lying between the Ajangayam Tirupathur Range boundary in the north and the foot-path leading from Palayapalayam to Kelaiyur in the south.
4	1981–82 .. 1984–85 ..	Mambakkam	I	1,995·10	Mambakkam Reserved Forest.	The northern portion of Mambakkam reserve lying to the north of the foot-path leading from Pudur to Jamnamarathur.
	1982–83 .. 1985–86 ..	Do.	II	1,133·12	Mambakkam Reserved Forest. and Extension Reserved Forest.	The whole of Mambakkam Extension Reserved Forest and the Part of Mambakkam Reserve lying to the south of foot-path leading from Pudur to Jamna-marathur and to the north of to Mambakkam. the foot-path running from Puliyur
	1983–84 .. 1986–87 ..	Do.	III	1,271·12	Mambakkam Reserved Forest.	The southern portion of Mambakkam reserve, lying to the south of the foot-path leading from Puliyur to Mambakkam.
5	1981–82 .. 1984–85 ..	Puliyur	I	1,541·05	Puliyur unreserve	That part of Puliyur unreserve lying between the foot-path leading from Mambakkam to Nellivasal (via) Melpattu and the foot-path running from Mambakkam to Valayampattu (via) Puliyur.
	1982–83 .. 1985–86 ..	Do.	II	1,808·94	Do.	The Central portion of Puliyur unreserve lying to the north of the foot-path leading from Mambakkam to Valaiyampattu (via) Puliyur and to the south of the foot-path from Jamnamarathur to Valaiyampattu (via) Pudur, Melur and Kombai.
	1983–84 .. 1986–87 ..	Do.	III	498·15	Do.	The northern portion of Puliyur unreserve lying to the north of the foot path leading from Jamnapudur to Valaiyampattu touching Pudur, Melur and Kombai.

6	1981-82 1984-85	Singarapet	I	878·17	Govindapuram Reserved Foest and Singarapet Extension Reserved Forest.	The Northern portion of Govindapuram reserved lying to the north of Nellivasal to Samachi Kottai foot-path and the north western portion of Singarapet Extension reserve lying to the north of the same foot-path.
	1982-83 1985-86	Do.	II	468·63	Singarapet Extension Reserved Forest.	The south-western portion of Singarapet Extension Reserved Forest lying to the south of Nellivasal to samachi Kuttai foot-path, and west of the ridge running towards south from the peak of 3336 and 3227 south of Nellipattu.
	1983-84 1986-87	Do.	III	896·78	Puliyur unreserve	The south western portion of Puliyur unreserve lying to the west of the foot path leading from Mamabakkam to Nellivasal touching Melpattu.
7	1981-82 1984-85	Puliyanur	I	847·00	Singarapet Extension Reserved Forest	The northern portion of Singarapet Extension R.F.serve Forest lying between the Singarapet to Pudur forest road in the east and Nellivasal to Puliyanur foot path in the west.
	1982-83 1985-86	Do.	II	5·33·38	Do	The eastern portion of Singarapet Extension Reserved Forest lying to the east of the Singarapet to Pudur forest road.
	1983-84 1986-87	Do.	III	624·03	Do.	The southern portion of SingarapetExtension Reserved Forest lying to the west of the foot path leading from Nellivasal to Puliyanur in the east and to the east of the ridge running south from peak 3336 along 3227 south of Nellipattu.
8	1981-82 1984-85	Malaitirupathur	I	1,040·85	Inner Javadi Reseved Forest.	The southern end of Inner Javadi ReservedForest lying to the south of the foot path leading from Malayandipatti to Adivaram.
	1982-83 1985-86	Do.	II	738·14	Do.	That portion of Inner Javadi reserve lying between the foot path leading from Malaiyandipatti to Adivaram in the south and the footpath leading from Malaiti upathur to Chinnasamudram in the north.
	1983-84 1986-87	Do.	III	1,359·75	Chinnasamudram and Inner Javadi Reserved Forest.	The portion of Inner Havadis reserve lying between the foot path leading from Malai tirupathur to Chinna samudram in the south and the foort path leading from Puliyu to Valaimpattu in the North and part of Cinnasamudram-reserve lying to the south of the Puliyur to Valaiampattu foot path.
9	1981-82 1984-85	Nadukuppam	I	1.014·95	Do.	That portion on Inner Javadi reserve and Chinnasamudram reserve lying between the Puliyur to Valaiyampattu foot path in the south and the Kombai-Paramanandal foot path in the north.
	1982-83 1985-86	Do .	II	1,018·59	Do.	That part of Inner Javadi reserve and chinnasamudram reserve lying between the Kombai to Paramanandal foot path in the south and the Nadukuppam to Kuppanatham foot-path in the north.
	1983-84 1986-87	Do	III	619·98	Inner Javadi Reserved Forest s.	The Central portion of Inner Javadis Reserve lying between the Nadukuppam to Kuppanatham foot path in the south and the stream that runs from Nadukuppam towards east (via) Dindampattu in the north till it meets the Reserved Forest boundary at 1047.
					Alangayam Range.	
10	1981-82 1984-85	**Mangalam**	I	623·22	Mangalam Reserved Forest	The North western portion of Mangalam reserve lying to the west of the Mangalam to Vallipattu foot path.
	1982-83 1985-86	Do.	II	740·58	Do.	The north western portion of Mangalam reserve lying between the Mangalamto Vallipattu foot path in the west and the Mangalam to Reddiyur foot path in the east.
	1983-84 1986-87	Do.	III	1,096·70	Do,	The Central and southern portion of Mangalam reserve lying to the south of Mangalam to Reddiyur foot path.

Serial number.	Year of felling.	Name of coupe.	Number of coupe.	Area in ha.	Location.	Boundaries.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
11	1981–82 1984–85	Nagaluthu.	I	925·10	Jolarpet RF Nagalathu R. F. Nagaluthu Extension R. F.	The entire Jolarpet Reserved Forest and the Northern portion of Nagaluthu and Nagaluthu Extension, Reserved Forests lying to the north of the Kottur to Yelagiri foot excluding Bamboo plantations 1962 1963, 1964. 1966, 1967 and 1968.
	1982–83 1985–86	Do.	II	882·21	Nagaluthu Reserved Forest ..	The southern portion of Nagaluthu reserve lying to the south of the Kottur to Yelagiri foot path.
	1983–84 1986–87	Do.	III	1,031·95	Mangalam Extension (Bits I and II)	The two bits of Mangalam Extension Reserved Forest.
12	1981–82 1984–85	Alangayam	I	2.041·24	Alangayam Reserve Forest ..	The north western portion of Alangayam Reserved Forest lying to the west of the ridge running in and alomost northernly direction from point 2083, 2165 through Kambattimalai connecting peak 2695. 2714 and point 2244 down to the place where the reserve boundary is cut by the Alangayam to Kallaparaj foot-path.
	1982–83 1985–86	Do.	II	1.333·44	Alangayam Reserve Forest s ..	*North.* The Alangayam reserve boundary from the point where the Alangayam-Kallaparai foot path cyts the bouddary upto the point where the settaponam-Thirtham cart track cuts the boundary. *East.* The foot path leading from point 2283 to Settaponam and beyand till it cuts the reserve boundary. *South.* Alangayam to Mandarakuttai cart track upto point 2283. *West.* There along the Reserved Forest boundary towards north west to a peak 2083 and long the ridge running in an almost northernly direction from point 2083 and 2165 through Kambati malai 2695. 2714 and pojnt 2244 dowfl to the point where the reserve boundary is cut by the Alangayam to Kallaparai foot path.
	1983–84 1986–87	Alangayam	III	1.315·23	Alangayam reserved forest ..	The southern and eastern portion of Alangayam reserve lying souh and east of the Alangayam to Mandarakuttai cart track up point 2282 and thence continued ofl the foot path leaning to Settaponam and beyond.
13	1981–82 1984–85	Mandarakuttai	I	419·25	Inner Javadi Reserved Forest ..	The northern portion of Inner Javadi Reserved Forest lying to the north of Gilman Road and south of the stream following east wards midway between Gilman road and Mantharakuttai to Melarsampattu foot path.
	1982–83 1985–86	Do.	II	455·68	Do.	The northern end of Inner Javadi Reserved Forest lying betwee the Mandarakuttai to Melarasampattu foot path in the north and the stream that flows eastwards midway between the said foot path and gilman road in the south.
	1983–84 1986–87	Do.	III	577·49	Do.	The northern end of Inner Javadis Reserve Forest lying to the Wes of the Mandarakuttai to Melarasampattu foot path.
14	1981–82 1984–85	Pungulam	I	1,436·23	Pungulam Reserved Forest and Inner Javadi Reserved Forest.	The southern portion of Pungulam Reserve Forest lying south of the Andiappanur to Kavalur road and the central portion of Inner Javadi Reserved Forest west of Garagamandai Ar that flows southwards to join Cheyyar river and north of the Alangayam-Tirupathur Range boundary.

	1982-83 1985-86	Do.	II	1,812·99	Pungulam Reserved Forest ..	The north and western parts of Pungulam reserve lying to the west of Nayakkanur enclosure and west of ridge running aimost southwards from the southwest corner of the said enclosure upto the Andiappanur-Kavalur forest road.
	1986-87	Do.	III	1367·84	Pungulam Reserved Forest and Inner Javadi Reserved Forest.	The eastern portion of Pungulam Reserved Forest lying to the east of the ridge that runs almost southwards from the southwest corner of theNayakkanur enclosure and the central portion of Inner Javadi Reserved Forest that lies between the Garagamandai Ar. in the west of and the Vasanthapuram to Bandirevu foot path in the east upto the range limits.
15	1981–82 1984-85	Nayakkanur	I	569·80	Inner Javadi Reserved Forest.	The portion of Inner Javadi reserve lying between the Vasanthapuram Bandirevu foot path and the Nayakkanur Nagamarathupattarai.
	1982-83 1985-86	Do.	II	665·30	Do.	The portion of Inner Javadi Reserved Forest lying between the Nayakkanur Nagamarathupattarai foot path and the Nayakkanur Velichanur foot path.
	1983.84 1986-87	Do.	III	515·16	Do.	The northern portion of the Inner Javadi Reserved Forest lying between the Gilman road and the Nayakkanur-Velichanur, foot path.
					Chengam Range.	
16	1981–82 1984–85	Palamarathur	I	528·92	Palamarathur Reserved Forest.	The southern portion of Palamarathur Reserve Forest lying to the south of Nayakkanur Velichanur foot path.
	1982–83 1985–86	Do.	II	931·95	Do.	The central portion of Palamarathur Reserved Forest lying between the Nayakkanur to Nelichanur foot-path in the south and the Nayakkanur to Timirimarathur foot path in the north.
	1983-84 1986-87	Palamarathur	III	596·91	Palamarathur Reserved Forest.	The northern portion of Palamarathur **R.F. lying** north of Nayakkanur to Timirimarathur foot path.
17	1981-82 1984-85	Bardirevu	I	600·58	Tenmalai Reserved Forest ..	The north western portion of Tenmalai reserve lying to the north of the Modalai Maduvu Ar.
	1982-83 1985-86	Do.	II	463·77	Do. ..	*North.*—The Modalaimaduvu Ar that joins the Cheyyar river south of Kovil Kallur. *East.*—Thence the boundary runs along the eastern boundary of Tenmalai Reserved Forest till it meets Kal Ar., thence generally southwards till it meets peak 3,328. *South.*—From the point 3328 a line west wards joining the stream and then along the stream upto the western boundary of the reserve. *West.*—Western boundary of the reserve upto the starting point.
	1982-83 1986-87	Do.	III	572·23	Do. ..	*North.*—Southern boundary of BC II. *East.*—Thence towards south-wes. to a peak which is at distance of 45 chains. Thence towards south-east about 65 chains till it meets Pamb ar. *South.*—Thence along the Pambar river till it meets the western boundary of Tenmalai reserved forest. *West.*—Western boundary of Tenmalai reserved forest to the starting point.

Serial number.	Year of felling.	Name of coupe.	Number of coupe.	Area in ha.	Location.	Boundaries.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
				Chengam Range—cont.		
18	1981-82 1984-85	Kallathur	I	645·07	Tenmalai Reserved forest	*North.*—Pamb ar. river. *East.*—The stream that runs north-wards from Kudumichet peak of 3557 feet. *South.*—The ridge running south-west from Kudumichet peak of 3,557 feet upto the western boundary of the reserve connecting point 2,912. *West.*—Western boundary of the reserve upto the starting point.
	1982-83 1985-86	Do.	II	383·24	Do.	*North.*—The ridge running south-west from Kudumichet peak of 3,557 upto the western boundary of the reserve touching point 2,912. *East.*—The ridge running south-east from Kudumichet peak to the point where the Perumattam enclosure is cut by the Kal odai *South*. The Kal odai. *West.*—Western boundary of Tenmalai reserved forest to the strating point.
	1983-84 1986-87	Kallathur	III	924·17	Do.	*North.*—The Kal odai. *East.*—The western boundary of Perumattam enclosure Puliyur-Melpet forest road and Melpet-Paramanandal bridle path (enclosure-excluded) upto Papathi odai. *South.*—Thence it runs towards north-west upto Kuttar and thence along Kuttar till it leaves the western boundary of Tenmalai reserved forest. *West.*—Western boundary of Tenmalai reserve forest upto the starting point.
19	1981-82 1984-85	Kuppanatham	I	310·80	Do.	*North.*—Starting from a point where Kuttar river crosses western boundary Tenmalai reserve forest the boundary runs along the said Ar. to a distance of about 25 chains beyond peak 2,102, thence south-east wards where Paramanandal bridle path crosses Papathi odai. *East.*—Melpet-Paramanandal bridle path upto point 2,525. *South.*—Kuppanatham-Perumalmalai foot path. *West.*—Western bonndary of the reserved forest to the starting point
	1982-83 1985-86	Do.	II	347·22	Do.	*North.*—The Kuppnatham Perumalmalai foot path upto the Paramanandal bridle path and thence along the foot path upto Perumalmalai. *East.*—The ridge from peak 3,505 along the ridge 2,364 upto Punai kattipallam (peak 1,899). *South and west.*—Southern and western boundary of the same reserve from point 1,899 upto the Kuppanatham Perumal-malai foot path.
	1983-84 1986-87	Do.	III	246·05	Do.	*North.*—A straight line about 10 chain east from point 3,348 and runs upto the point 2,779. *East.*—The ridge running south-west through peak 3,146, 3,525, 3,409, till it meet Perumalamalai on peak 3,505. *South.*—Thence along the Kuppanatham foot path till it m es Paramanandal-Melpet bridle path. *West.*—Melpet-Paramanandal bridle path upto the starting point.

20	1981-82 1984-85	Tenmalai Central	I	714·68	Tenmalai reserved forest ..	*North.*—Attipatti-Perumattam foot path. *East.*—The Korai Ar. originating from Attipatti enclosure. *South.*—A straight line from point 3,348 up to Korari Ar. through peak point 2,779. *West.*—Paramanandal bridle path and Melpet-Puliyur forest road. (Enclosures excluded).
	1982-83 1985-86	Do.	II	424·52	Do.	*North.*—The Pamb Ar. river Originating from the south-west corner of Puliyur enclosure. *East.*—The Thalur Attipatti foot path (via) Erukkampattu Att patti and Erukkampattu (Enclosures are excluded). *South.*—Attipatti Perumattam foot path Puliyur-Melpet Forest Road and Melpattu-Paramanandal bridle path. *West.*—The western boundary of Perumattam enclosure, thence the ridge north-west from the north-western corner of Perumattam enclosure upto the Kudumichet peak, of 3,557, and thence the stream that runs northwards to Pamba. Ar
	1983-84 1986-87	Do.	III	631·72	Do.	*North.*—Southern boundary of Padapanjamarathur enclosure. *East.*—Kootathur-Melpet Forest Road. *South.*—Thence Attipatti-Thalur foot path till it crosses the western boundary of Erukkanpatti enclosure. Thence along north-west to a distance of 90 chains to a peak (Enclosures excluded). *West.*—Thence along north-east to the starting point near **Kal** Ar. through peak 3,328.
21	1981-82 1984-85	.. Tenmalai East	I	649·94	Do. (enclosures excluded).	*North.*—Northern boundary of Tenmalai reserved forest. *East.*—Attipatti Paderi foot path touching Nellivoy and Melthattiapattu (enclosures excluded). *South.*—Attipatti-Erukkampattu foot path up to the forest road. *West.*—Kootathur Melpet forest road.
	1982-83 .. 1985-86 ..	Do.	II	655·19	Do.	*North.*—Northern boundary of Tenmalai reserved forest. *East.*—Eastern boundary of the same reserve and the ridge connecting 3,558, 3,678 and 3,668 up to the Viranandal Attipatti foot path. *South.*—Viranandal—Attipatti foot path. *West.*—Attipatti—Paderi foot path (via) Nellivoy and Melthattiapet (enclosures excluded).
	1983-84 1986-87.	.. Tenmalai East	III	566·47	Tenmalai reserved forest ..	*North.*—The Perumattam—Viranandal foot path (via) Attipatti. *East.*—The ridge running almost southwards along the peaks 3,451 (Durga malai) 2,854, 3,137 to a peak 3,037. *South.*—A straight line from point 3,037 up to Korai Ar. *West.*—The Korai Ar. up to starting point (enclosures excluded).
22	1981-82 1984-85.	.. Nallapattu South	I	284·49	Nallapattu, reserved forest ..	The central portion of Nallapattu reserve lying south of Valakad Athiyanur foot path and north of the road, Chinnavara Kuttai till it meets the eastern boundary of Nallapattu reserved forest.
	1982-83 .. 1985-86.	Do.	II	217·32	Do.	The central portion of Nallapattu reserve lying between the Kilvilamuchi to Pelavadi foot path in the south, and the road from Chinnavara kuttai till it meets the eastern boundary of Nallapattu reserved forest in the north (enclosures excluded).
	1983-84 .. 1986-87.	Do.	III	432·20	Do.	The southern portion of Nallapattu reserve lying south of the Kilvilamuchi—Pelavadi foot path (enclosures excluded).

Serial number	*Tear of felling*	*Name of coupe*	*Number of coupe*	*Area in ha*	*Location*	*Boundaries*
(1)	(2)	(3)	(4)	(5)	(6)	(7)
23	1981-82 1984-85.	Nallapattu North	I	425·73	Nallapathu reserved forest	*North and east.*—The Nallapattu reserves boundary. *South.*—Valakad foot path till it meets a stream at a distance of about 40 chains thence along the stream till it meets chinnavaakuttai—Valakad footpath. *West.*—Thence along the foot path leading to Chinnavavakuttai till it cuts the northern boundary of Nallapattu reserved forest (starting point).
	1982-83 1985-86.	Do.	II	336·70	Do.	The north-western portion of Nallapattu reserve lying west of Chinnavavakuttai to Valakad foot path and north of Model Ar. till it meets the reserved forest boundary at peak point 2062.
	1983-84 1986-87.	Do.	III	295·42	Do.	The central portion of Nallapattu reserve surrounded by Model Ar. boundary of B.C. I Athiyanur—Valakad path and western boundary of Nallapattu reserved forest (enclosures excluded).
				SATHANUR RANGE.		
24	1981-82 1984-85.	Valasamalai	I	1,679·52	Valasamalai reserved forest	The northern half of Valasamalai reserve lying north of the foot path running from Ulchekkadi to Naripalli (via) Melvalasa (enclosures excluded).
	1982-83 1985-86.	Do.	II	698·09	Do.	The central portion of Valasamalai reserve that lies between the foot path running from Ulchekkadi to Naripalli (via) Melvalasai in the north and the footpath that runs from Ulchekkadi to Akkarapatti and thence Gudaram in the south (enclosure, excluded).
	1983-84 1986-87.	Do.	III	708·20	Do.	The southern portion of Valasamalai reserve that lies south of Ulchekkadi to Akkarapatti foot path and east of Akkarapatti—Gudaram footpath.
25	1981-82 1984-85.	Nattampalli	I	924·30	Nattampalli reserved forest	The western portion of Nattampalli reserve lying west of the footpath running southwards from Athipadi to Thekkampatti.
	1982-83 1985-86.	Do.	II	520·43	Do.	The central portion of Nattampalli reserve lying between the foot path running southwards from Athipadi to Thekkampatti and the Nattampalli Ar.
	1983-84 1986-87.	Do.	III	657·20	Do.	The eastern portion of Nattampalli reserve lying east of Nattampalli Ar.
26	1981-82 1984-85.	Swamimalai	I	380·40	Perungulathurswamimalai reserved forest.	The western end of Perungulathur swamimalai reserve lying west of the foot-path leading from Noerkunni to Kodayanur (via) Ayyambadi.
	1982-83 1985-86.	Do.	II	644·67	Do.	*North.*—Starting from a point where the foot path from Neerkunni to Kodaianur cuts northern boundary of P. Swamimalai reserved forest, the boundary runs along the said reserved forest till it meets point where Navakollai to Swamimalai temple foot path cuts the reserved forest boundary. *East.*—Thence along footpath leading from Navakollai to Swam malai temple and thence along stream that runs south from ne Swamimalai temple to join Yerkamuduvu Ar. and thence alo the said Ar.till it meets southern boundary of said reserved fore

					South.—Thence along the southern boundary of the saidreserved forest towards west till it meets the foot path leading from Neerkunni to Kodaiyanur. *West.*—Thence along the said foot path up to the starting point.
1983-84 1986-87. ..	Do.	III	777·00	Do.	*North.*—Starting from a point where the foot path fromNavakollai to Swamimalai temple cuts the northern boundary of P. Swami malai reserved forest the boundary runs along the same reserved forest till it meet the cart track from Navakollaito Puliyankottai. *East.*—Thence along the said cart track till it leaves the southern boundary of P. Swamimalai reserved forest. *South.*—Thence along the reserve forest boundary towards west till it meets Yerkamaduvu Ar. *West.*—Thence the boundary runs along the Erukkamaduvu Ar. up to Swamimalai temple and thence along the foot path leading to Navakollai till it meets the starting point.

171. DETAILED LIST OF SUCCESSFUL PLANTATIONS TO BE WORKED DEPARTMENTALLY AGAINST THE YEAR NOTED.

Name of the range and reserved forest. (1)	*Year of plantation.* (2)	*Area in ha.* (3)	*Total area in ha.* (4)	*Prescroibed years for departmental working.* (5)
Chengam Range—				
Mudanai R.F.	1963	35·21	..	....
Do.	1964	19·83	..	....
Sathanur Range—				
Pinjur ' C ' block	1965	4·05	..	....
Do.	1966	10·93	70·02	1978–79, 1981–82, 1984–85, 1987–88.
Sathanur Range—				
P. Swamimalai R.F.	1965	12·54	..	....
Do.	1966	18·61	..	....
Alangayam Range—				
Jolarpet R.F.	1962	12·14	..	....
Do.	1963	10·93	..	....
Do.	1964	13·10	67·32	1979–80, 1982–83, 1985–86, 1988–89.
Sathanur Range—				
Ponnaiyar R.F.	1966	16·19		....
Do.	1968	38·04	..	....
Do.	1969	40·06	94·29	1980–81, 1983–84, 1986–87, 1989–90.

172. COLLECTION DEPOTS AND EXTRACTION PATHS:—

A list of collection Depots and extraction paths prescribed for each coupe is furnished below.

Name of series. (1)	*Coupe number.* (2)	*Name of collection depot.* (3)	*Extraction paths.* (4)
		Tirupathur Range.	
1 **Andiappanur**	I	Cart track from Andiappanur touches the R.F. Boundary on the western side of Buddiguddai.	All paths through coupe to depot and then to Andiappanur.
	II	The point in coupe where the Kurichilapet foot path cuts the Andiappanur reserved boundary, and the point near coupe where the Goddu Ar and Andiappanur cart-track meet.	All paths through coupe to depots and on cart-tracts leading from the depots.
	III	Rajapalayam	All paths through coupe to depot.
2 Kambugudi	I II III	Kambugudi Rangasamudram Thagarakuppam	All paths through coupe to depot and the forest road from Thagarakuppam to Andiappanur with its feeder tracks.
3 Thagarakuppam	I	Kallathur Thurinjikuppam	All paths through coupe to depot and the Cheyyar valley cart-tracks.
	II	Kallathur Kelaiyur	
	III	Kelaiyur Ondinathalnur	
4 Mambakkam	I II III	Kannupuliamaram Mambakkam Mambakkam	All paths through coupe to depot and the forest road from Pudur to Singarapet.
5 Puliyur	I II III	Malaiyandipattu Puliyur Pudur	All paths through coupe to depot and the forest road from Pudur to Singarapet.

172. COLLECTION DEPOTS AND EXTRACTION PATHS—*cont.*

A list of collection Depots and extraction paths prescribed for each coupe is furnished below .

Name of series. (1)	*Coupe number.* (2)	*Name of collection depots.* (3)	*Extraction paths.* (4)
6 Singarapet	I	Ankuthu Jonai	All paths through coupe to depot and the cart-track through Govindapuram reserve to main road joining near Govindapuram.
	II	Reddivalasai	All the paths through coupe to depot and the cart-track from depot to main road (via) Periyatallapadi.
	III	Nellivasal	All paths through coupe to depot and the road from Nellivasal to Singarapet.
7 Puliyanur	I	The point where the Puliyanur river cuts the Singarapet forest road.	All paths through coupe to depot and the forest road leading to Singarapet.
	II		
	III		
8 Malaitirupathur	I	Adivaram	All paths through coupe to depot and all cart-tracts leading from depot to the Tirupathur Chengam highway.
	II	Adivaram	
	III	Chinnasamudram	
9 Nadukuppam	I	Valasamalai east	All paths through coupe to depot and all cart-tracks leading from depot to the Singarapet—Paramanandal highway.
	II	Kottanur	
	III	Kuppanatham	
		Alangayam Range.	
1 Mangalam	I	Vallipattu	All paths through coupe to depots. the Yelagiri ghat road and the cart-track leading from Vallipattu to the Alangayam highway.
		Athanavur	
	II	Reddiyur	All paths through coupe to depot. The cart-track leading from Reddiyur to Alangayam highway.
	III	Marimanikuppam	All paths through coupe to depot. The carttrack from depot to Alangayam highway.
2 Nagaluthu	I	Vakkanampatti	All paths through coupes to depot and all cart-tracks leading from depot to Main Roads.
	II	Krishnapuram	
		Yelagiri	
	III	Perumapattu	
		Rajapalayam.	
3 Alangayam	I	Thirthapallam	All paths through coupe depots the gillman road and Asanampet road from depots.
		Kalrapatti	
	II	Kalrapatti	
	III	Reddiyur	
4 Mandarakuttai	I	Kavalur	All paths through coupes to depots. The Gillman road, Mandarakuttai road and the cart-track leading to Melarasampattu from Mandarakuttai.
	II	Mandarakuttai	
		Melarasampattu	
	III	Mandarakuttai	
		Melarasampattu.	
5 Pungulam	I	The tri junction were the Vasanthapuram road joins the Andiappanur Kambagudi road.	All path and roads through coupe and the Andiappanur forest road.
	II	Pungulam	All paths and roads to depots through coupe Also Andiappanur road Poongulam road.
		Andiappanur	
	III	Vasanthapuram	All paths and roads to depot through coupe The forest road from Vasanthapuram to Alangayam (via) Kavalur.
6 Nayakkanur	I	Jattukuttai Sathuram	All paths and tracks to depots through coupe The Vasanthapuram—Kavalur road and Gillman road.
		Vasanthapuram	
	II	Valukkamparai	
		Nayakkanur	
	III	Kavalur	
		Nayakkanur.	
		Chengam Range.	
1 Palamarathur	I	Valukkamparai	All paths to depots through coupe. The Kootathur forest road. Gillman road and cart-track from Valukkamparai to Gillman Road.
		Kilsilambadi	
	II	Valukkamparai	
		Kalyanamandai	
	III	Gillman road near west end of coupe	All paths to depot through coupe an the Gillman road.

Name of series. (1)	*Coupe number.* (2)	*Name of collection depot.* (3)	*Extraction paths.* (4)
2 Bandiravu	I	Kovilkollai	All paths through coupe to depot. The Puliyur—Alangayam forest road and cart-tracks from depots to the forest road. The Cheyyar valley cart-track.
		Vannankuttai	
		Vilamarathur	
	II	Vilamarathur	
		Muthanallur	
	III	Oorgoundanur	
		Thalur	
		Pambar Pattarai	
3 Kallathur	I	Kallathur	All paths through coupe to depot. The Chayyar valley cart-track.
		Pambar Pattarai	
	II	Malayandikollai	
	III	Navapattarai	
		Thenmarathur pattarai	
4 Kuppanatham	I	Cheyathankulam	All paths from coupe to depots. The Cheyyar valley cart-tracks.
		Poonaikuthi Vazhi	
		Sengattiamman Koil	
	II	Do.	Do.
	III	Cheyathankulam	All paths in coupe and then along the Kuppanatham foot path to depot. The Cheyyar valley cart-track.
5 Tenmalai Central	I	Chinnakilpet	All paths through coupe to depots. The Forest road from Melpet to Alangayam and feeder roads from depots .
		Perumattam	
	II	Perumattam	
		Erukkampet	
	III	Puliyur	
		Thalur	
		Erukkampet	
6 Tenmalai East	I	Puliyur	All paths leading from coupe to depots. The forest road from Melpet to Alangayam and feeder roads from depots.
		Nellivoy	
	II	Athipattu	
		Nellivoy.	
	III	Athipattu	
		Kilpattu	
7 **Nalla**pattu south	I	Valakad	All paths through coupe and Palamarathur unreserve to depots. The Melpet—Alangayam forest road.
		Nachamalai	
	II	Valakad	
		Paderi	
	III	Kilvilamuchi	
8 Nallapattu North	I	Chinnavavakuttai	All paths through coupe and Palamarathur unreserve to depots. The Melpet—Alangayam forest road.
		Nallapattu	
	II	Kootathur	
		Chinnavavakuttai	
	III	Kootathur	
		Pulichakuttai	
		Sathanur Range.	
1 Valasamalai	I	Bimarapatti	All paths through coupe to depots and the cart-tracks from depots joining the Naripalli—Thanipadi road.
	II	Ulchekkadi	
	III		
2 Nathampalli	I	Ulchekkadi	All paths through coupe to depot and the cart-tracks from depot to Naripalli—Thanipadi road.
		Athipadi	
	II	Athipadi	
		Puliyambatti	
	III	Pudur chekkadi	
3 Swamimalai	I	Neerkunni	All paths through coupe to depots and cart tracks from depots joining the Perungulathur—Thanipadi Road.
	II	Navakollai	
		Neerkunni	
	III	Navakollai	
		Kodianur.	

Section 7—Regulation of artificial regeneration operations.

173. In view of the multifarious uses to which Bamboos **are put ranging from buildings use to basket making, it has always** enjoyed keen demand from the public. Added to this it has attained the status of a major industrial raw material to feed the growing paper industry. The natural resources in the forest, in view of over exploitation in the past, has limited the yield and a stage has come to supplement the genuine need by increasing the area under bamboo crop through artificial regeneration. But the areas most suitable for bamboo regeneration mostly contain good growth of natural forest species and clearing them for this purpose does not seem to be a sensible proposition. An area of 75.00 hectares in Mambakkam Extension RF which was till recently encroached, is prescribed for planting bamboos over a period of three years under this plan. In addition large extent of unreserves which are to be handed over to the forest department shortly, are available for planting bamboos in addition to other species. Palamarathur and Kambugudi unreserves are already notified under section 26 of the Madras Forest Act and the notification of Puliyur unreserves is pending. Since the exact extent and location of areas available for transfer to the forest department in these unreserves can be assessed only after a survey, it is not possible to prescribe exactly a programme for future planting of bamboos in these unreserves before the transfer is effected. It is hoped that at least about 1000 hectares of ideally suitable area will be available in all the three unreserves for planting in the next ten years after handing over of the areas to the forest department and planting bamboos at the rate of 100 hectares in all the three centres annually is suggested. On transfer of these unreserves, a scheme to plant bamboos may be drawn up to make the planting areas contiguous and planting programme implemented in an orderly manner.

174. *Choice of species.*—Both the species of bamboos have been tried in the plantations raised so far in the Division. Bambusa arundinacea is generally preferred on account of its greater size and utility. Its having thorny branches gives it a certain amount of protection from grazing animals. This species does better in valleys, stream banks and moister localities while for drier conditions, Dendrocalamus strictus may be planted as this is a hardier species.

175. Bamboos will be planted pure, as interplanting with species like Eucalyptus has posed some management problems in the working of the two species separately in different years. Felling of one species has caused enormous damage to the other and extraction has also been difficult as the felled Eucalyptus get entangled in the clumps of bamboos and removal from the clumps causes excessive damage to bamboo clumps.

176. *Tabular statement of annual planting programme*:—Mambakkam extention RF, which was under encroachment till recently, has been selected for planting of bamboos over a period of 3 years, as indicated below. The areas prescribed are marked in the management maps. Following are the areas selected, extent to be regenerated each year and **coupe numbers allotted.**

Locality.	*Coupe number.*	*Area to be regenerated in ha.*	*Year of regeneration.*
(1)	(2)	(3)	(4)
Mambakkam Extension RF.	I	25	1979
Do.	II	25	1980
Do.	III	25	1981

177. *Nursery.*—The requirement of nursery stock shall be raised near the planting centre. The previous conventional method of raising first in mother beds and pricking out in prepared beds at specific spacing, irrigating beds and planting two year old seedlings with rhizomes has changed to one of raising bamboos in polythene containers for a period of one year and planting out in the field, as the former method proved to be costly and cumbersome in careful removal, packing and transport of rhizomes. The current practice is fairly successful and the raised crop is comparable with the one raised under the former method.

178. The selected nursery site should be dug to a depth of 30 cm. after removing all stumps, roots, etc. Where **hand watering is possible, raised beds of 12 metres by 1.2 metres by 20 cm. will be formed out of the dug up earth.** Farm yard manure at the rate of 1 cart load per bed will be mixed with the soil. It is recommended that the raked up **soil is sprayed either with 5 per cent D.D.T. or 1 per cent gammaxene before forming it into beds towards off damage** by ants and other insect pests. The sides of the beds will be supported by bamboo splits reinforced with pegs driven into the ground at suitable intervals. An interspace of 0.5 metre should be left between bed and bed to facilitate watering, weeding, etc.

179. Bamboo seeds shall be sown at the rate of 0.5 kg. per **bed. There are 32,000 to 36,000 seeds of Dendrocalomus** strictus and about 30,000 seeds of Bambusa arundinacea for 0.5 kg. A standard sized nursery bed of 12m x 1.2m sown with 0.5 kg. of seeds will give about 4,000 seedlings.

180. After one and a half months the seedlings will be fit enough to be transplanted into the container bags of suitable size, viz. 25 cm. x 13 cm. of 250 gauge. One year old container plants shall be planted.

181. *Preparatory work*:—As the areas selected for planting contain very little growth due to past cultivation, there is little to clearfell. What little growth, there is, shall be clearfelled and burnt. Best results are obtained by Kumri method and the area will be offered for Kumri cultivation for a period of two years. If no Kumridar is available, Departmental work of clearing, uprootal and ploughing should be done.

182. ***Espacement*:**—Espacement to be followed will be 6m x 6m.

183. ***Planting*:**—**Planting of container seedlings will be done in 45 cm. cube pits. One year old container seedlings** should be used. Planting should be done after the on-set of south-west monsoon in June-July.

184. *Replacement of casualties.*—Casualties will be replaced during the year of planting as and when noticed, but mostly during the north-east monsoon. A minimum of two weedings should be done during the 1st and 2nd year. Soil working also may be done twice a year during the first two years. It should be done to a depth of 10 to 15cms in 2 metre square around the plants.

185. *Cleaning*:—Since numerous culms develop in 3rd or 4th year in each clump, a cleaning at the end of 3rd year by removal of dead and malformed culms will help relieving of congestion in clumps and also will help to stimulate the individual growth of culms and development of the clump. This cleaning operation should be done departmentally, carefully, as over cleaning may result in the falling or bending of left out culms.

186. *Fencing.*—Bamboo is sensitive to grazing and browsing by cattle and wild animals and hence the Kumridars should be persuaded to raise a pacca fence around the regeneration area. If funds permit a chain link fence may be provided to the regeneration area.

187. *Grazing.*—All bamboo plantations will be closed to grazing for a period of 5 years, including the year of formation.

188. *Fire protection.*—The planted area should be properly protected from fire by external and internal fire lines which are to be annully fire traced. The fire lines should be 2m wide and kept scrapped of all vegetation annually.

Section 8—Other regulations.

189. *Record of statistics.*—Contractors should be required to submit monthly account of the quantity of bamboos of each species removed from the coupe exhibiting properly their classification. Often this is not insisted on and it is very difficult to assess correctly the quantity and class of bamboos removed for statistical purpose. Wherever possible, it is better to insist on the rendering of the quantities removed by weight as well as number of bamboos whether small or big bamboos.

190. *Control.*—The control forms relating to this working circle shall be posted at the end of every year. Instance of flowering whether sporadic or gregarious shall be recorded in the control journals.

CHAPTER V.

THE FUEL WORKING CIRCLE.

SECTION I—GENERAL CONSTITUTION OF THE WORKING CIRCLE AND CHARACTER OF VEGETATION.

191. *General Constitution.*—The fuel working circle consists of a single block of forest in Singarapet R.F. which is capable of being worked for fuel in case of need as a " Reserve series ". It extents over the plain forests at the foot of the Javadis located at about 30 km. from Tirupathur.

192. Fuel working circle of the Division as it was constituted during the last plan covered an area of 23,056·55 ha. consisting of 22 series as follows :—

Range and name of fuel series. (1)	*Area in ha.* (2)	*Reserves in which located.* (3)
I. Tiruvannamalai	Nil.	
II. Sathanur Range—		
1 Ponniar East	1,625·21	Ponniar R.F.
2 Ponniar West	936·85	Do.
3 Sorappanandal	1,331·41	Do.
4 Beemarapatti	942·11	Valasamalai R. F. and Nathampalli R.F.
5 Swamimalai	692·33	P. Swamimalai R.F.
6 Royandapuram	701·72	Royandapuram A. & B.
7 Veppur East	855·91	Ponniar R.F.
8 Veppur West	1,162·26	Do.
9 Reddiyapalayam	1,338·29	Do.
10 Chinnayampettai	618·51	Chinnayampettai R.F.
III. Chengam Range—		
11 Ravandavadi	1,712·23	Ravandavadi R.F.
12 Anandavadi East	1,619·95	Anandavadi R.F.
13 Anandavadi West	1,326·96	Do.
14 Melchengam	602·17	Melchengam R.F.
15 Mudanai	1,529·71	Mudanai R.F.
IV. Tirupathur Range.—		
16 Singarapet	766·88	Singarapet R.F.
17 Govindapuram	744·62	Govindapuram R.F.
18 Andiappanur	664·90	Andiappanur R.F.
19 Chinnasamudram North	527·71	Chinnasamudram R.F.
20 Chinnasamudram South	587·20	Do.
V. Alangayam Range.—		
21 Alangayam	1,402·23	Alangayam R.F.
22 Mantharakaittai	1,371·88	Inner Javadi RF and Alangayam RF.

193. Of these Beemarapatti fuel series in Sathanur Range was closed as per Chief Conservator of Forests No. 32530/63, dated 7th December 1963 as the coupes were situated on hilly tracts and gave scope for the illicit removal of fuel from the adjoining Ariyagoundan Jagir and Kottapatti R.F.

194. The working of fuel coupes of Chengam, Tirupathur and Alangayam Ranges were closed for the next 10 years from 1975–76 as the contained poor yield and inview of the supply of fuel from felling of village plantations and the vast area cleared for regeneration under crash programme as per orders of the Chief Conservator of Forests D. Dis. 69436/76, K4, dated 9th December 1974.

195. All the ten coupes of Sathanur Range were dropped from sale from 1975–76 as per orders of the Chief Conservator for of Forests in reference No. 90122/76, W3, dated 8th March 1976.

195. The part of following fuel series have been prescribed for **conversion into plantation series in this Plan.**

	Name of Range. (1)	*Name of fuel series.* (2)	*Name of R.F.* (3)	*Converted plantation-series.* (4)
1	Chengam	Ravandavadi (Part)	Ravandavadi R.F.	Hardwood (Misc.) Plantation series.
2	Tirupathur	Chinnasamudram North and South (Part).	Chinnasamudram R.F.	Tamarind plantation series.
3	Do.	Govindapuram	Govindapuram R.F.	Eucalyptus Plantations series

196. In view of the Government orders in their letter No. 13010/FR/V/77-1. Forests and Fisheries Department, dated 22nd March 1977 to suspend clearings of natural forests, it is not proposed to prescribe any regular fuel series. Any how as a contingency "Reserve fuel series" is marked tomeet any unusual demand and the working of the coupes of this series should be done after obtaining prior orders of Government, if working in any particular year is unavoidably necessitated.

197. *Division into felling series.*—Only one "Reserve fuel felling series" is indicated viz the Singarapet fuel felling series.

198. *Character of the Vegetation.*—The nature of growth met with in this working circle, conforms to Southern Dry Thorn Forests and rarely Secondary Dry Deciduous Forests.

Section 2—Analysis and Valuation of crop.

199. It is seen from the yield figures of past working, most of the fuel coupes have an annual yield of less than 10 tonnes per hectare. Coupes situated on higher slopes alone had some good growth of trees and the plain portions carried miserable growth of thorny bushes only. Very often some of these coupes were purchased as a ruse for illicit removal from the other areas resulting in great loss to forests alround.

200. It must be admitted that regeneration and stocking of the felled coupes by natural coppice growth has mostly failed. Even when it has succeeded the growing stock is impoverished and degraded. The process of degradation has been accelerated by illicit grazing, premature cutting of coppice growth and collection of green manure leaf, etc.

Section 3—Method of treatment.

201. *Silvicultural system.*—The silvicultural system to be followed will be "simple coppice" under which exploitation will be by the clear felling method with reservation of certain selected species like, sandal, tamarind, soapnut, pungam, etc. and regeneration will be mainly from coppice.

202. *Rotation.*—From past research in the Silviculturist Division it is learnt that the mean annual increment of the fuel species culminates by about the 25th year and the stool mortality is higher for 40 years. The coppicing power of stools, generally, gets poorer after 30 years and because of this it is desirable to fix the rotation at 30 years. At the end of 30 years it would be possible to obtain trees of 30 to 40 cm. girth which can yield fairly big size billets acceptable in the market. Hence the rotation is reduced to 30 years from 40 years of the last Plan.

203. *Regulation of working.*—Felling will be regulated entirely by area. The felling series has been marked with 10 coupes of more or less equal area. For the 'Reserve fuel series" numbering of coupes has been done in continuation of the last worked coupe starting from nine. The coupes have been marked on the map and area of each coupe has been computed.

Section 4—Method of Executing fellings.

204.—The series prescribed is only a "Reserve fuel felling series" and should not be taken up for normal working as a routine. Only in the year of demand one coupe of the series will be worked for that particular year after obtaining orders of the Government for specified reasons. When there is no acute demand, or scarcity of fuel, no coupe will be worked. The sequence in which the coupe is to be worked and area of each coupe are shown in the working plan map. In view of the uncertainty regarding the year of working, no tabular statement of fellings is prescribed. Coupes prescribed for future working are serially numbered from IX to XXX since coupes upto VIII are worked during the previous plan period.

205. *Survey and demarcation.*—The coupe to be worked shall be surveyed and demarcated on the ground by 3 metres wide cut lines. Stone cairns about 1/2 a metre height will be built along the cut lines at suitable intervals in such a way that viewed from any cairn, the adjacent one on either side will be visible. In addition, the trees along the outer periphery of the coupe shall be ring marked, numbered and hammer marked with a departmental hammer at breast height point and listed, showing particulars of serial number, species, girth of the trees in the list.

206. The correct area of the coupe will be computed from the sketch plotted on the basis of the survey. Any difference between the actual surveyed area and the area as computed from the working plan map which is less than 10 per cent of the latter will not be treated as a deviation needing ratification.

207. *Division into strips.*—Each coupe will be divided into strips and worked strip by strip to ensure systematic working as well as to prevent removals in excess of the lease amount paid by the contractor at any particular stage of the contract. The strips will be demarcated by means of cut lines 1.5 metres wide with small cairns built along the cleared line at suitable intervals. Depending upon the size of the coupe, there will be not less than two and not more than four strips in each coupe. While numbering strips, the accessible and lower portion adjoining the worked coupe will be given the first number.

208. *Agency of exploitation.*—Exploitation will be through the agency of contractor as the system has been established and found to be satisfactory. Coupes will be sold in public action in January or early February so as to enable the lessees to commence the work by 1st April.

209. *Period of lease.*—The period of lease will depend on the size of the coupe and will be regulated on the following basis.

For coupes exceeding 20 hectares in extent—Not exceeding one year.

For coupes exceeding 8 hectares and not exceeding 20 hectares in extent—Not exceeding 9 months.

For coupes 8 hectares or less in extent—Not exceeding 6 months.

210. The Range Officer should ensure by repeated inspections that not only the work is carried out as per conditions of sale but also the progress of work is sufficient to complete the removals by the end of the period of contract.

211. *Reserved species:*—All sandal, tamarind, soapnut neem, gallnut and pungam shall be normally treated as reserved trees and excluded from felling. However overmature, hollow, stunted, moribund and unsound trees which may not, survive a rotation, need not be retained and numbered.

212. *Felling rules.*—(1) The coupe shall be felled in an orderly manner strip by strip. The contractor will be permitted to start work in a new strip only after satisfactory completion of work in the previous one and payment of lease amount due for new strip. The strip sequence will be indicated in the sketch accompanying the agreement.

(2) The reserved trees shall not be felled by the contractor. The list of reserved trees shall be handed over to the contractor at the time of execution of the agreement and his acknowledgement for receipt of the same obtained in the duplicate copy of the list and filed. The serial numbering of the reserved trees may be done in a systematic manner strip by strip to facilitate easy verification subsequently.

(3) Bamboo and minor forest produce are excluded from the scope of the fuel coupe lease and should not be exploited by the fuel coupe contractor.

(4) Trees and other growth occurring along the banks of important streams shall be retained to a width of 20 metres from the edge of the stream banks. Important streams are the perennial ones within and along the boundaries of the coupe. Well grown evergreen trees of Terminalia arjuna, Mangifera indica, Syzygium cuminii, etc., found on the banks of such streams also should be enumerated and listed out for purpose of retention and shall not be felled.

(5) It will be open to the lessee to fell all growth other than reserved trees. He shall not be bound to cut and remove any growth he does not wish to.

(6) Timber converted from fellings in the coupe, if any, shall be kept at stump site until it is hammer marked and passed by the Range Officer.

(7) Sharp implements should be used for felling to ensure least damage to the bark on the stool. The cut should be clean and close to the ground so that the height of the stump does not exceed 30 cm. Dressing or trimming of the stool is unnecessary.

(8) After felling and conversion, firewood should be stacked before removal from the coupe and should be of size 3m x 1m x 1m.

(9) The stumps should be kept clean of all felled materials and debris to enable unhampered coppice regrowth.

(10) The lessee shall be permitted to lay extraction paths in any part of the coupe to connect existing cart tracks and roads. The use of earth slides for extraction purposes is prohibited.

(11) The lessee shall be responsible for maintaining the coupe boundaries and strip lines during the period of the lease.

(12) The lessee shall be responsible for all illicit fellings and removals of forest produce from a belt of 20 chains width of Government land around the periphery of the leased area.

(13) The contractor or his authorised agent shall personally supervise the working of the coupe.

Section 5—Tabular statement of fellings.

213. As the series prescribed is only a "Reserved Fuel felling series" and is not to be worked on a regular basis year after year, except when needed with special sanction of the Government, no tabular statement of felling is prescribed. But the coupes are to be worked in the order of marking in the map. The name of the reserve felling series is to be called " Singarapet Reserve Fuel felling series ".

Section 6—Other regulations.

214. *Demarcation of worked coupes*:—To show the limits and year of working of felled coupe, coupe stones shall be planted at its salient corners within one month of completion of working. The 'Number' of the felled coupe and the year of working should be chiselled on each such stone slab. On coupe stone planted at common corner of two worked coupes, the coupe number and year of working of both the coupes should be chiselled on the respective half of the slab surface. The coupe stones should be planted in such a way, that any person who reads the stone always faces the worked coupes in question. Any old coupe stones found inside the coupe should be removed to avoid confusion in the future.

215. *Regulation of grazing.*—Felled coupes shall be closed to grazing for a period of 5 years. There should not be any laxity in enforcing this prescription. Closure boards should be planted at prominent places.

216. *Charcoal burning.*—Charcoal burning is specifically prohibited inside the reserved forests.

217. *Supply of Agricultural implements.*—The lessee shall supply on payment small timber and fuel in the manner and rates fixed by the District Forest Officer and incorporated in the agreement.

218. *Record of statistics.*—Every contractor shall be require to furnish monthly accounts of removals of firewood and timber, if any, from the coupes not later than 10th of the succeeding month. Such accounts should be supported by the counterfoils of all permits issued by him.

219. The following conversion factors may be adopted:—

2 cubic metres of stacked fuel—1 tonne.

40 head loads of fuel—1 tonne.

1.4 cubic metres of timber—1 tonne.

220. *Control maps.*—After completion of felling of the coupe and on receipt of completion report by the District Forest Officer, the worked area will be posted in the control map by colour wash with the year of working written in black ink at the centre. Wherever the area actually worked differs from the prescribed area, the outline of the actual worked area will be superimposed on the prescribed area in dotted lines.

221. *Control records.*—The control records shall be maintained by the District Forest Officer in the forms prescribed.

CHAPTER VI.

Village Forests Working Circle.

Section 1—Object and general Constitution of the Working Circle.

222. During the past few decades there has been a deplorable decrease in the area and quality of the forests due to the increasing population and consequent demand for various forest products like fuel, bamboos, etc., to meet the day to day needs of the people. It was found difficult to hold on to the existing forest land under the present pressure for land for agriculture. With little over 16 per cent of total **area under forests, the National Forest Policy enunciated** in 1952, to maintain 33 per cent of the land area under **forests, remained an Utopian dream nearly over a quarter** of a century. In order to divert the pressure on forest land in meeting the day to day needs of the village for fuel, manure leaf, small timber, etc., it was decided to utilise the lands at the disposal of the Government outside the RF limits for growing trees of useful species, especially in and around villages to meet the local demand for such forest produces. With this object in view, the Farm Forestry programme was undertaken in this Division from 1961 onwards in Government lands, and lands vested with the Panchayat such as **Porambokes, waste lands, etc., on a phased programme,** Initially the scheme failed to attract the villagers, **but of** late the scheme is gaining momentum, due to the Exceptional results achieved by this department in raising very successful plantations on lands otherwise would have remained barren **and unutilised. On the enactment of the Panchayat Act** of 1958 in 1960, all the Porambokes and village waste lands vest with the Panchayats concerned and it was obligatory to get the concurrence of the concerned Panchayat to take up planting on such lands. Though in initial period of implementing this scheme, there was difficulty in getting concurrence of the Panchayats, of late, this attitude of the Panchayats is changing and many Panchayats are offering **voluntarily the areas in their jurisdiction for planting purposes** in view of the financial benefit they get as per G.O. Ms. No. 117 Agriculture, dated 12th January 1971 wherein it is **ordered that 50 per cent of the sale proceeds of these plantations** should be remitted to the Panchayat Union concerned.

223. *General constitution.*—This working circle comprises of all old plantations raised under **Farm Forestry scheme** outside the RF limits in the Division and all such areas that may be selected and planted during this plan period under **the scheme. This includes areas selected and planted both** by this Division staff as well as by the Extension Forestry Division staff so far they fall within the jurisdiction of the Tirupathur Division.

Section 2—Analysis of the crop and valuation.

224. Of all the afforestation schemes undertaken by the department, plantations under Farm Forestry Scheme are by far the most successful. Karuvelan plantations raised in tank beds are generally very encouraging. Many plantations which have been felled after the rotation period, have yielded returns, manifold. Though some of the earlier plantations have not been so good, due to lack of knowledge of planting technique, poor protection, etc., with the experience gained, the technique has been almost mastered and in recent years, raising of good plantation has become no problem at all.

225. There is a great variation in the area planted under Farm Forestry schemes, year to year and also in the rate of growth owing to the varying soil conditions. But generally, the rate of growth, especially of Babul, is quite fast when compared to the growth prevailing in forest areas.

226. The abstract of the areas planted in each Range jurisdiction is as follows:—

Alangayam—307.10 hectares.
Chengam—1,342.09 hectares.
Tirupathur—403.64 hectares.
Sathanur—579.00 hectares.
Tiruvannamalai—1,924.74 hectares.

Total—4,556.57 hectares.

227. A detailed list of all Farm Forestry plantations is given in Appendix **XXI-A.**

228. From the above it can be seen that the annual planting area was as low as 40 hectares and as high as 1,219 hectares in some years.

229. The following statement reveals how there is a great variation in the areas planted blockwise and this is mainly due to the variation in annual target depending on the allotment of funds in each year and also due to the easy availability of areas or otherwise in the Block level. Hence felling on the basis of taking Block as a unit is difficult to arrive at a normal felling annually. The following statement gives the total area planted under Farm Forestry in each of the Block up to 1976.

Range. (1)	*Name of Block.* (2)	*Area planted in hectares upto* 1976. (3)
1. Tiruvannamalai	Tiruvannamalai	621·18
2. Do.	Kilpennathur	672·12
3. Do.	Thurinjapuram	631·44
4. Sathanur	Thandrampet	548·65
5. Chengam	Chengam	527·86
6. Do.	Pudupalayam	844·58
7. Tirupathur	Tirupathur	272·44
8. Alangayam	Peranampattu	115·30
9. Tirupathur	Kandili	131·20
10. Alangayam	Alangayam	100·80
11. Do.	Natrampalli	91·00
	Total ..	4,556·57

230. Detailed statement of Farm Forestry plantations in each block is furnished in Appendix XXI-B.

231. A volume table for Babul is prepared by Thiru H. Rajagopal Shetty, I.F.S., based on the data collected from various farm forestry plantations

232. *Nature of species.*—As most of the areas taken up under this scheme are tank beds, the main species that has to be planted is Babul as it can stand inundation for a reasonable period. Wherever the foreshores of the lake beds are significantly shallow and contain good loamy soil, other fast growing species like Eucalyptus hybrid are being planted. In case of poramboke lands which are not lake beds, other long rotation hardwood species are being planted. Even in tank beds which are occasionally saline, species like Acacia leucopholea (Velvelan) are to be planted.

Section 3—Method of Treatment.

233. *Silvicultural system.*—Though Babul is acclaimed to be a poor coppicer this applies only to mature trees. Babul when felled early in life does coppice well and this phenomenon is good enough to prescribe natural regeneration by coppice at the end of first and second rotations. The silvicultural system to be followed will be clearfelling followed by natural regeneration from coppice supplemented by artificial regeneration wherever necessary in the case of existing Babul and Eucalyptus plantations.

234. *Choice of species.*—Babul will be the main species as most areas tackled are tank beds and water stagnation for short periods is unavoidable. Where soil is saline, Acacia leucopholea (Velvelan) will be planted. In foreshores of lake beds where soil is loamy and inundation is practically nil, species like Eucalyptus hybrid and other miscellaneous hardwoods like Tamarind, Parambai, etc. will be planted. In waste lands and hillocks, miscellaneous hardwood species like Acacia planifrons, Acacia nilotica, Acacia leucopholea, Acacia ferrufinea, Acacia sundra, Hardwickia binata, etc., may be planted.

235. *Rotation.*—Since the main object of raising Farm Forestry plantations is to supply fuel, small timber, fodder, etc., to villages surrounding the plantations, a shorter rotation of 10 years is prescribed. For the hardwood plantations raised on hillocks, waste lands and foreshores of lake beds a tentative longer rotation of 30 years is prescribed considering the poor nature of the soil and as a measure of soil conservation of such areas.

236. *Regulation of yield.*—Yield will be regulated by area. The plantations so far raised are scattered all over the Division. There is no Panchayat Union, Block or Range which contains all the age gradations. The area covered by the various age gradations whether in a Block, Union or the Division itself is far from uniform and shows wide disparity. The ideal thing would have been to have Panchayat Union or Block as the unit containing plantations of all age gradations covering more or less equal area so that they could be worked to get approximately equal annual yield on a sustained basis. But practically this is made difficult due to the unwillingness of certain Panchayats to give formal concurrence and the variation in the planting target year to year. Till these things are set right the only course is to carry out felling following the planting at the end of the rotation age of 10 years.

Section 4—Method of executing fellings.

237. *Agency of exploitation.*—Exploitation will be through the agency of contractors through sales by open auction generally. If however there is demand for the wood from the Pallipalayam Paper Mill or other Industrial concerns for plantations which have no local demand, such plantations may be sold to them at approved negotiated rates.

238. *Survey and demarcation.*—Normally the surveyed sketches of the plantation to be felled are there in the Range Offices and District Forest Office. The plantation is also demarcated with cairs on the ground. If the demarcation on the ground is not traceable the boundary has to be fixed with reference to the sketch.

239. In cases where some plantations have failed partly, it is better to adopt the following procedure. If the failed patches are found inside the plantations, they may be ignored and calculation of anticipated yield is done giving allowance for such blanks. If the failed patch is to one side of the plot on the periphery a survey may be done by running the compass and chain along the periphery of area of growth and a sketch prepared, posted in original sketch and area computed. The reason, for the difference in original area of plantation and the revised area may be recorded and reported. The failed patches should be regenerated along with coppice growth by artificial regeneration.

240. *Period of lease.*—The work of survey and demarcation of the Plantation area and estimation of yield, etc., should be completed by the end of August and coupes offered for sale by September. The period of lease should start by 1st November or on the date of agreement whichever is later. The lease period will be one month for area up to 5 hectares and there after at the rate of one month for every 10 hectares or parts there of. Extension of time may be given in exceptional cases as for fuel coupes. However the felling operation should be completed by the end of April since otherwise it may interfere with the establishment of coppice regeneration.

241. *Division into strips.*—A plantation above 10 hectares will be divided into strips of roughly equal area and no strip should be more than 20 hectares.

242. *Marking Reserved trees.*—Though normally, the main species planted in lake beds is babul, occasionally, on the foreshores of lake beds miscellaneous hardwood species of economical importance like Tamarind, Pungam, Neem, etc., are planted taking advantage of non-inundation during the rainy season. Such trees should be marked as "Reserved Trees" and left unfelled. Similarly trees planted on bunds should be retained as they help in strengthening the bunds. They should also be marked as "Reserved Trees."

243. *Felling rules.*—Important felling rules are:—(1) Felling should proceed systematically from one side to the other in a strip. Only on completion of one strip the contractor will be permitted to work the next strip. Marking of the strips both on the field and on the sketch should be done and the contractor should be given a copy of the sketch along with the agreement copy.

(2) Only saws should be used for felling and conversion. The saw cut should be neat with bark in tact and should not more than 20 cm. from ground level.

(3) The "Reserved trees" shall not be felled or damaged.

(4) The stumps shall not be damaged or covered with branches or brushwood, etc.

(5) The billets should be 1m length and fuel stacked in stacks 3m x 1m x 1m before removal.

Section 5—Tabular statement of fellings.

244. In view of the non-systematic planting programmes in the past, the crop is far from normal and hence felling has to follow planting on a 10 year rotation. Based on this the following felling programme is prescribed and the abnormality in the annual yield is inevitable.

245. The following statements furnish the list of plantations prescribed for felling against the years noted and Blockwise abstract of area prescribed for felling during the period of the plan.

Statement showing the list of Farm Forestry plantations prescribed for felling in Tirupathur Division from the year 1978–79.

Year of felling.	*Name of the plantations.*	*Year of regeneration.*	*Name of the block.*	*Area in ha.*	*Name af Range in which the area lies.*
(1)	(2)	(3)	(4)	(5)	(6)
1978–79	Chengam	Raised 1968	Chengam	10·12	Chengam Range.
	Velur	Do.	Thandrampet	16·19	Sathanur Range.
	Andiappanur	Do.	Alangayam	14·00	Alangayam Range.
				40·31	
1979–80	Anwarabad	Raised 1969	Chengam	13·00	Chengam Range.
	Kottakulam	Do.	Pudupalayam	37·23	Do.
				50·23	
1980–81	Kottakulam Periyeri	Raised 1970	Do.	40·00	Do.
				40·00	
1981–82	Seriandal	Coppice 1971	Tiruvannamalai	20·20	Tiruvannamalai.
	Mallavady	Do.	Thurinjapuram	20·20	Do.
	Valayampattu	Do.	Chengam	32·37	Chengam Range.
	Sundakapalayam	Raised 1971	Do.	40·47	Do.
				113·24	
1982–83	Nochimalai	Coppice 1972	Tiruvannamalai	20·20	Tiruvannamalai.
	Kanakanderi and Vadakanderi.	Raised 1972	Thandrampet	23·00	Sathanur.
	Tharadapattu	Do.	Do.	27·50	Do.
	Kayampattu	Coppice 1972	Chengam	40·47	Chengam.
	Karapattu	Do.	Pudupalayam	15·47	Do.
	Melmudianur	Raised 1972	Do.	23·00	Do.
	Eraiyur	Do.	Do.	46·00	Do.
	Tirupathur tank bed	Coppice 1972	Tirupathur	20·60	Tirupathur.
	Muthur	Do.	Do.	10·20	Do.
	Korattai	Do.	Kandili	60·70	Do.
	Thumberimitta	Do.	Natrampalli	51·00	Do.
				338·14	
1983–84	Adaiyur	Coppice 1973	Tiruvannamalai	50·58	Tiruvannamalai.
	Samudram	Raised 1973	Do.	54·00	Do.
	Karikalambady	Do.	Kilpennathur	37·00	Do.
	Kolathur	Do.	Do.	53·00	Do.
	Yerpakkam	Do.	Do.	20·00	Do.
	Sanipondi	Raised 1973	Do.	15·00	Do.
	Inamkariandal	Coppice 1973	Thurinjapuram	20·20	Do.
	S. Kariandal	Raised 1973	Do.	12·00	Do.
	Mannai	Do.	Do.	26·00	Do.
	Thokkavady	Coppice 1973	Chengam	60·70	Chengam.

Statement showing the list of Farm Forestry plantations ***prescribed for felling*** *in Tirupathur District from the year 1978–79.*

Year of felling. (1)	*Name of the plantations.* (2)	*Year of regeneration.* (3)	*Name of the block.* (4)	*Area in ha.* (5)	*Name of Range in which the area lies.* (6)
1983–84	Munhurmangalam	Coppice 1973	Pudupalayam	60·70	Chengam
	Melmudianur	Raised 1973	Do.	15·60	Do.
	Thorapady Small lake	Do.	Do.	25·00	Do.
	Thorapadi Big lake	Do.	Do.	46·00	Sathanur.
	Chettikuttai	Do.	Thandrampet	23·70	Do.
	Thandrampet	Coppice 1973	Do.	23·07	Do.
	Kurumanyeri	Do.	Do	22·26	Do.
	Kilravandavady	Do.	Do.	17·81	Do.
	Tharadapattu Pudu Eri.	Raised 1973	Do.	26·50	Do.
	Kilvanakkambadi	Do.	Do.	69·00	Do.
	Viranam	Do.	Do.	20·00	Do.
	Tirupathur tank bed	Do.	Tirupathur	42·80	Tirupathur.
	Thriyalam	Coppice 1973	Do.	25·50	Do.
	Tirupathur tank bed	Do.	Do	40·50	Do.
	Madapalli	Do.	Do.	40·50	Do.
	Agraharam	Do.	Do.	40·50	Do.
				887·92	
1984–85	Athiyandal	Coppice 1974	Tiruvannamalai	20·20	Tiruvannamalai.
	Samudram	Raised 1974	Do.	65·00	Do.
	Melchettikuttai	Do.	Do.	27·60	Do.
	Manjampoondi	Do.	Do.	16·20	Do.
	Somaspadi Chitteri	Do.	Kilpennathur	46·00	Do.
	Somaspadi Chitteri	Do.	Do.	20·00	Do.
	Sirunathur	Do.	Do.	28·00	Do.
	Kottaneri	Do.	Do.	38·00	Do.
	Chatram	Coppice 1974	Thurinjapuram	20·20	Do.
	Palleri	Raised 1974	Do.	45·00	Do.
	Vadapulidiyur	Raised 1974	Do.	45·00	Do.
	Kilsirupakkam	Coppice 1974	Thandrampet	24·28	Sathanur Range.
	Melsirupakkam	Do.	Do.	56·66	Do.
	Kolandampattu	Raised 1974	Do.	27·50	Do.
	Melkaripur	Do.	Do.	25·10	Do.
	Kariyamangalam	Coppice 1974	Chengam	64·00	Chengam.
	Varadanthangal	Do.	Do.	14·98	Do.
	Pinjur	Raised 1974	Do.	20·20	Do.
	Uchimalaikuppam	Do.	Do.	31·10	Do.
	Amandapudur	Coppice 1974	Pudupalayam	24·28	Do.
	Melpadur	Raised 1974	Do.	69·00	Do.
	Adaiyur	Coppice 1974	Kandili	30·00	Tirupathur.
				773·30	

Statement showing the list of Farm Forestry plantations prescribed for felling in Tirupathur Division from the year 1978–79.

Year of felling. (1)	*Name of the plantations.* (2)	*Year of regeneration.* (3)	*Name of the block.* (4)	*Area in ha.* (5)	*Name of Range in which the area lies.* (6)
1985–86	Thellambadi	Raised 1975	Kilpennathur	25·30	Tiruvannamalai.
	Mekkalur	Do.	Do.	30·40	Do.
	Kadambai	Do.	Do.	30·20	Do.
	Kalpoondi	Do.	Do.	13·67	Do.
	Pondai	Do.	Thandrampet	23·20	Sathanur.
	Chinnayampet	Raised 1975	Do.	20·20	Sathanur.
	Malayanur Chekkadi	Do.	Do.	26·70	Do.
	Reddipalayam Bits II.	Do.	Do.	17·30	Do.
	Sorapanandal	Coppice 1975	Chengam	30·35	Chengam.
	Nachipattu	Raised 1975	Do.	28·30	Do.
	Kolanthangal	Do.	Do.	16·02	Do.
	Kuilam	Do.	Do.	18·70	Do.
	Thulukkanthangal	Do.	Do.	14·60	Do.
	Melpennathur	Do.	Do.	28·30	Do.
	Sanand	Do.	Do.	14·00	Do.
	Melpudur	Coppice 1975	Pudupalayam	20·20	Do.
	Padiagraharam	Raised 1975	Do.	42·00	Do.
	Nandimangalam	Do.	Do.	41·50	Do.
	Melmudianur Chitteri	Do.	Do.	29·60	Do.
	Alangayam Lake Bit I	Coppice 1975	Alangayam	21·60	Alangayam.
	Alangayam Lake Bit II II.	Do.	Do.	10·70	Do.
				502·84	
1986–87	Melputtiyandal	Raised 1976	Tiruvannamalai	13·00	Tiruvannamalai.
	Kilkachirapattu	Do.	Do.	17·00	Do.
	Vinnamalai	Do.	Do.	17·00	Do.
	Veraiyur	Do.	Do.	72·00	Do.
	Pavirtam	Do.	Do.	50·00	Do.
	Nallavanpalayam	Do.	Do.	37·00	Do.
	Ottakudisal	Do.	Do.	12·00	Do.
	Melkachirapattu	Do.	Do.	22·00	Do.
	Andampallam	Do.	Do.	67·00	Do.
	Kiranur	Do.	Kilpennathur	24·00	Do.
	Konalur	Do.	Do.	31·00	Do.
	Nadalaganandal	Do.	Do.	9·00	Do.
	Rajanthangal	Do.	Do.	10·00	Do.
	Vayalur	Do.	Do.	43·00	Do.
	Avoor	Do.	Do.	40·00	Do.
	Polakanam	Do.	Do.	27·00	Do.

Statement showing the list of Farm Forestry plantations prescribed for felling in Tirupathur Division from the year 1978–79.

Year of felling.	*Name of the plantations.*	*Year of regeneration.*	*Name of the block.*	*Area in ha.*	*Name of Range in which the area list.*
(1)	(2)	(3)	(4)	(5)	(6)
1986–87—*cont.*	Kattumalaiyanur putheri.	Raised 1976	Kilpennathur	12·00	Tiruvannamalai.
	Kattumalaiyanur Anneri.	Do.	Do.	20·00	Do.
	Kattumalaiyanur Manneri.	Do.	Do.	29·00	Do.
	Porkunam	Do.	Thurinjiapuram	79·00	Do.
	Sorakolathur Periyeri	Do.	Do.	80·00	Do.
	Kamalaputhur	Do.	Do.	62·00	Do.
	C. Andapattu	Do.	Do.	40·00	Do.
	Narthampoondi	Do.	Do.	55·00	Do.
	Melpulidiyur	Coppice 1976	Chengam	29·95	Chengam.
	Korathampattu	Raised 1976	Pudupalayam	25·00	Do.
	Panaoilaipady	Do.	Do.	68·00	Do.
	Karapattu	Do.	Do.	25·00	Do.
	Karapattu	Do.	Do.	25·00	Do.
	Endal	Do.	Do.	24·00	Do.
	Kallarapady	Do.	Do.	27·00	Do.
	Mashar	Do.	Do.	60·00	Do.
	Munniyandal	Do.	Do.	24·00	Do.
	Nayambadi	Do.	Do.	31·00	Do.
				1,206·95	
1987-88	Perumattam	Coppice 1977	Chengam	20·23	Chengam.
	Pakkiri Eri	Do.	Alangayam	11·30	Alangayam.
	Goundan Eri	Do.	Do.	12·80	Do.
				44·33	

246. STATEMENT SHOWING THE ABSTRACT OF FARM FORESTRY AREAS PROPOSED FOR FELLING ANNUALLY—BLOCKWISE FOR TIRUPATHUR DIVISON.

(Area in hectares)

Serial number and name of the block.	Years.										Total.
	1978–79.	1979–80.	1980–81.	1981–82.	1982–83.	1983–84.	1984–85.	1985–86.	1986–87.	1987–88.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Tiruvannamalai Range—											
1 Tiruvannamalai	..	..	..	20·20	20·20	104·58	129·00	..	307·00	..	580·98
2 Kilpennathur	..	..	..	..	..	125·00	132·00	99·57	245·00	..	601·07
3 Thurinjapuram	..	..	..	20·20	..	58·20	125·20	..	316·00	..	519·60
Sathanur Range—											
4 Thandrampet	16·19	..	..	..	50·50	202·34	133·54	87·40	..	..	489·97
Chengam Range—											
5 Chengam	10·12	13·00	..	72·84	40·47	60·70	130·28	150·27	29·95	20·23*	527·86
6 Pudupalayam	..	37·23	40·00	..	84·47	148·30	93·28	133·30	309·00	..	844·58
Tirupathur Range—											
7 Tirupathur	..	..	..	..	30·80	189·80	..	..	..	..	220·60
8 Kandili	..	..	..	..	60·70	..	30·00	..	..	..	90·70
Alangayam Range—											
9 Alangayam	14·00	..	..	..	..	..	..	32·30	..	24·10*	70·40
10 Natrampalli	..	..	..	..	51·00	..	..	..	..	..	51·00
11 Peranampattu	..	..	..	..	..	..	..	..	..	..	..
	40·31	50·23	40·00	113·24	338·14	887·92	773·30	502·84	1206·95	44·33	4397·26

Note.—*These areas are inclusive of plantations which are proposed for raising during 1977–78 * 44·33 hectares are the areas sold in 1976 but worked in 1977–78 and hence come op for felling during 1987–88.

* 1977 Target allotment for the whole division, 400·00 ha.

SECTION 6—REGULATION OF ARTIFICIAL REGENERATION OPERATIONS.

247. The main species planted in tank beds is Karuvelan. Occasionally Eucalyptus hybrid and other miscellaneous hardwood species are also planted on the foreshores where there is little or no water stagnation and where the soil is good. If Eucalyptus hybrid is planted it is better to plant it on a compact block without mixing them with other miscellaneous hardwood species. Both Eucalyptus hybrid and Babul coppice well and this coppicing power will be made full use of for the regeneration of second and third rotation crops. The felling rules are prescribed to obtain the maximum coppice from the felled stumps. In understocked plantations or in plantations where coppice regrowth is not sufficient to restock area fully, the coppice regeneration will be supplemented by artificial regeneration as in fresh area.

248. In addition, fresh areas will be taken up annually depending on the annual targets fixed under plan schemes. Since the plan targets vary considerably year to year, no detailed planting programme is indicat d in advance in this plan. Any how for the sake of easy selection of areas every year, a list of areas available for planting still is furnished in Appendix XXXIV. Though this list is not exhaustive, it certainly will help the Divisional staff in their search for areas for raising future plantations and the District Forest Office will have the full discreation to select areas from out of the list and also not to select areas included in the list. It has to be mentioned here that since large and more suitable areas of tank beds have already been selected and planted in the past years, as years proceed it would be possible only to select smaller areas, often with poorer soil in future years. But there are still number of hill porambokes, which can be tackled for planting species like parambai (Acacia-ferruginea) and odai (Acacia planifrons) which are almost fool proof species capable of adopting themselves to any soil and climatic condition.

249. The following list furnishes plantations of poor stocking which require to be tackled a fresh and the blanks may be separately surveyed and planted in future years.

STATEMENT SHOWING THE LIST OF FAILED FARM FORESTRY PLANTATIONS PROPOSED FOR RESTOCKING IN TIRUPATHUR DIVISION.

Serial number.	*Year.*	*Name of plantation.*	*Area in hectares.*	*Remarks.*
(1)	(2)	(3)	(4)	(5)
		Tiruvannamalai Range—Tiruvannamalai Block.		
1	1961	Vengikal	20·00	....
2	1964	Alaganandal	20·20	....
		Kilpennathur Block.		
3	1964	Sellankuppam	20·20	....
4	1965	Kilpennathur	30·35	....
5	1966	Do.	20·00	....
		Thurinjapuram Block.		
6	1961	Agaram Sibbandi	50·00	....
	1962	Maruthuvambadi	20·20	....
8	1963	Usambadi	20·23	....
	1963	Selappanandal	1·21	....
10	1964	Sorakolathur Periyeri	20·20	....
			222·59	
		Satkanur Range—Thandrampet Block.		
11	1962	Radhapuram Periyeri	40·47	....
12	1963	Radhapuram Periyeri	18·21	....
			58·68	
		Thirupathur Range—Tirupathur Block.		
13	1963	Anneri	21·44	....
14	1965	Achamangalam	30·40	....
		Kandili Block.		
15	1963	Kurumberi	40·50	....
			92·34	
		Alangayam Range—Pernampattu Block.		
16	1962	Elayanagaram Mitta	72·40	....
		Alangayam Block.		
17	1965	Govindapuram tank	30·40	....
			102·80	
		GRAND TOTAL ..	476·41	

250. *Survey and demarcation.*—After selecting the area to be planted survey and demarcation of the area should be completed before March of the year of planting. If there is no water in the lake bed, this work may be completed even earlier. Corners of plot may be demarcated with either cairns or even stone pillars as a permanent mark, and letter 'FD' chiselled on them.

251. *Preparatory work.*—Since most lake beds are devoid of any growth, there is not much of clearing work. If there is presence of unwanted growth, they may be cleared by the end of April and Pitting work completed by the end of May to enable planting in June, July.

252. *Espacement.*—Nearly 50 per cent more yield was noticed in lakes where plants are planted at an espacement of 2½ m × 2½ m than when the plants are planted at an espacement of 11' x 11'. Hence a closer planting of 2½ m × 2½ m is prescribed. For hillocks and plains of porambokes an escapement of 3.5 m x 3.5 m is prescribed.

253. *Planting.*—The present method of artificial regeneration is found quite satisfactory and will be continued.

254. Any how the following guide lines are indicated to get better results.

The conditions prevailing in lake beds vary from locality to locality and year to year. Some year the lake beds get filled up with rain water much early and water stagnates for longer periods while in other years, practically there is no water in the lake due to failure of rains. Such being the case certain amount of risk has to be taken in deciding the time of planting. On the presumption that the lake beds may get filled up with rain water, the planting is often postponed to December-January, as the water recedes, but unexpectedly that year, the north east monsoon may fail and planting without moisture in the soil could become impossible. On the other hand if in the hope that there may not be enough water stagnation. Planting in May, June, is resorted to and if in that year water stagnation results for long periods in heavy casualties may occur. Hence it is not proper to prescribe any definite period for planting in lake beds. But it is safer to resort to planting early at least over 2/3rds of the lake beds early in June-July and tackle the deeper portions as the water records.

Secondly planting of taller seedlings in deeper portions of the lake and shorter seedlings in the foreshores is safer. So long as the leading shoot of plants are above water level, Babul has the capacity to survive, may it be any length of period the other portions of the plant are submerged.

Thirdly, while planting as the water recedes, it is better to plant the container seedlings even when there is 4 to 5 inches of water in the lakes as this helps easy establishment of planted seedlings.

255. *Nursery.*—Raising of container seedlings of babul is easy and the current practice is good enough about 5 month old container seedlings are ideal for planting. Since the planting of the different levels of the lake beds are done at different periods, a phased raising of nursery stock to obtain about 5 month old seedlings should be programmed.

Section 7—Other Regulations.

256. *Name Boards.*—Every plantation should have a permanent name board, showing the area, year of formation, etc.

257. *Maps.*—A map showing the location of existing plantations, year and area, Block to which it concerns, etc., is prepared and accompanies this plan. Future plantations may be posted at the end of every year and the map maintained up-to-date.

258. *Yield particulars.*—When exploited, the contractor should furnish monthly accounts of the yield obtained to Range Officer concerned, as per the lease agreement.

259. *Closure to grazing.*—The regeneration area should be closed to grazing for a period of 5 years and for second and third rotation crops, for a period of 3 years.

260. *Extension Forestry work.*—In G.O. Ms. No. 2946, Agriculture Department, dated 27th November 1972, the Government have sanctioned the formation of two-Extension Forestry Divisions one at Tiruchirappalli for Tiruchirappalli circle and another at Vellore for Salem circle. The Vellore Extension Division will concentrate on planting in North Arcot district where numerous tank beds, Palar and Pennar River beds afford good sites for planting. In addition to the planting work the Extension Forestry Division also caters to the need of villagers with regard to demand for good sized container plants of useful trees and fruit bearing trees at subsided rates for planting in their fields and lands.

261. In G.O. Ms. No. 920, Forest and Fisheries letter, dated 20th December 1974 sanction was accorded for implementing an afforestation scheme of Marginal farmers and Agricultural labourers Development Agency, North Arcot district during 1974-75 and 1975-76. Utilising the funds placed by the Agency at the disposal of the State Forest Department, during the two years viz 1974-75 and 1975-76, plantations over an area of 305 hectares have been raised. The project officer, Marginal Farmers and Agricultural Labourers Development Agency, Chengam expressed the Willingness of the Agency to finance the implementation of a similar scheme to raise plantations, in Government waste lands in North Arcot district over a fresh area of 250 hectares, during 1976-77 and 1977-78. The entire cost of the scheme will be deposited by the Agency, at the disposal of the Forest Department for its implementation. The Government in their G.O. Ms. No. 183, Forests and Fisheries, dated 26th February 1977 sanctioned the implementation of the scheme over an area of 250 hectares at a cost of not exceeding 2.80 lakhs during 1976-77 and 1977-78 out of the funds already placed by the Agency at the disposal of the State Forest Department. The Government also sanctioned the employment of 4 Foresters and 4 Forest Guards till 28th February 1978 and 8 plot watchers for 10 years from the date of employment. They also directed that the Extension Forestry Division, Vellore should implement the scheme. The plantations raised under this scheme up to 1976 are indicated in Appendix XXI-C.

262. *Control Forms.*—Control Farms furnished in Appendix XXXVI should be posted in the District Forest Office at the end of the financial year.

CHAPTER VII.

HARDWOOD PLANTATION WORKING CIRCLE.

Section 1—General Constitution and Character of Vegetation.

263. *Object of management.*—The main object of the working circle is to rehabilitate the potential but degraded thorny scrub forests of the division of low fuel yield into plantation of more useful and suitable species yielding fuel and timber.

264. At present, there is great pressure for disreservation of these scrub forests for assignment for agricultural and other non-forestry purposes. An area, that is, considered suitable for agricultural farming is equally, eminently, suitable for raising useful tree crop and in the interest of preserving the forest area, it is essential to rehabilitate them for more useful purposes through intensive artificial regeneration.

265. *Constitution.*—This working circle consists of suitable areas in the plains and hill portions of the forests which had been subjected to repeated and heavy illicit fellings in the past and thereby reduced to degraded scrub type of vegetation at present. This also includes all existing successful miscellaneous hardwood plantations raised in the last and previous plan periods under various afforestation schemes. Only areas within easy access commanding facilities for work and thus can be easily developed into plantations of commercial value, have been included. Some of the former fuel coupes, degraded due to repeated indiscriminate fellings and adverse biotic factors and discarded due to poor yield have also been included in this working circle. All these areas are either plains or gently undulating ground, the top soil almost washed of leaving hard, compacted sub-soil capable of bearing only slow growing hard-wood species. Presence of gullies due to soil wash is more common in these areas. These areas are subjected to heavy grazing and goat browsing generally. To prepare these area to e suitable for growing tree crop, it is essential to clear and uproot the growth of inferior species and to plough preferably with tractors if possible and to replantation with more useful species.

266. *Character of vegetation.*—The prolonged drought in summer, ill distributed low rainfall and heavy incidence of grazing and illicit fellings, have reduced the existing growth to a few hardy stunted thorny species like Acacia sundra. Acacia latronum, Zizyphus Jujuba, Albizzia amara, etc. The type of forests met with in this working circle is mainly one referred to by Champion and Seth as the degraded stage of "Southern thorn forests" (6A/C2/DSI).

Section 2—Division of the areas.

267. Amongst the older plantations, bearing a few recently raised plantations, the rest have lost their identity and merged with the forests. This working circle covers such of those plantations raised successfully and areas proposed for planting during this plan period. The total area of the working circle is 6,45.66 hectares of which 4,808.63 hectares are proposed for planting in the ten series as detailed below:—

Serial number. (1)	*Name of the series* (2)	*Total area in hectares.* (3)
	I Thiruvannamalai Range	
1.	Tippakadu Hardwood (Miscellaneous) plantation series.	440.00
2.	Eraiyurmalai Hardwood (Miscellaneous) plantation series.	440·00
3.	Kannamadai Hardwood (Miscellaneous) plantation series.	437·63
4.	Kavuthimalai Hardwood (Miscellaneous) plantation series.	440.00
	II Sathanur Range	
5.	Radhapuram Hardwood (Miscellaneous) plantation series.	528·00
6.	Pinjur Hardwood (Miscellaneous) plantation series.	640·00
	III Chengam Range	
7.	Mudanai Hardwood (Miscellaneous) plantation series.	520·00
8.	Ravandavadi Hardwood (Miscellaneous) plantation series.	600.00
9.	Muthanur Hardwood (Miscellaneous) plantation series.	330·00
	IV Alangayam Range	
10.	Madacadappa Hardwood (Miscellaneous) plantation series.	433·00
		4808·63

Section 3—Analysis of the crop.

268. In the past few decades several attempts have been undertaken to rehabilitate portions of these degraded forests under various afforestation programmes. Varied planting techniques have been resorted to. The success of these plantations is nothing much appreciable and the main causes for poor results could be summed up to few factors, as discussed herein. In the past the areas tackled were not cleared of all rank growth in the entire area, as only narrow strip were cleared at specified intervals and planting done in the cleared strips. As this did not give fruitful results, later, clearing of these areas was done and planting of the container plants resorted to without uprooting of the stumps of existing inferior crop. This invariably resulted in the coppice regrowth of inferior species from leftover stumps causing suppression and heavy competition to the plantation crop. Only in the last few years, some plantations have been raised both by territorial Division and . . . . Crash plantation Division after clear felling uprootal and ploughing, with fair amount of success.

269. One other reason for the poor performance in the past is attributable to lack of proper follow up action in maintenance and protection of older plantations. Only particular attention was paid to the current year's plantations by the staff and older plantations were left without proper protection and maintenance. As already stated, since the plantations are raised on poor soils, the rate of growth is bound to be slow and the planted seedlings are susceptible to browsing by cattle unless plantation area is protected efficiently from grazing animals for a period of 5 years. In recent years, employment of plot mazdoors for every plot, has greatly improved the efficiency in protection.

Section 4—Method of treatment.

270. *Silvicultural system.*—Since none of the plantations so far raised under various afforestation programmes have reached the stage of maturity, the question of exploitation of them does not arise during the plan period. Regarding the areas proposed for regeneration during the plan period, the silvicultural system shall be clearfelling the existing degraded growth of thorny species followed by artificial regeneration of suitable species after uprootal and ploughing.

271. *Choice of species.*—The areas included in this working circle are mostly low rainfall tracts with an average precipitation of 700mm or less. Since the soil is shallow, gravelly to bouldary with fluctuating more on the alkaline side, only species which are hardy to such soil shall be planted. More over thorny species are preferred as they are less susceptible to browsing. This does not preclude species which are not thorny but which do grow well if proper protection is afforded from grazing animals.

272. The main species recommended are Acacia ferruginea, Acacia planifrons, Acacia arabica, Acacia sundra, Hardwickia, binata, Acacia-leucophloea, Alibizzia lebbeck, Azadirochta indica, Pterocarpus santalinus, etc., Most of the species recommended are extremely drought hardy. Acacia ferruginea and Acacia planifrons are extremely drought resistant and fairly quick growing.

273. *Rotation.*—As none of the plantations raised so far will become due for final felling during the period of this plan, the rotation is left as an open question to be decided at the subsequent revisions of the plan.

Section 5—Method of execution.

274. It is superfluous to exphasize the importance of intensive planting practice after bitter experience gained in the last few decades. It is not sufficient to confine to planting container plants without the complimentary moisture conservation measures to arrest the high evaporotion in the scrub forests. The mass of interlacing roots of the stumps and undergrowth has a nullifying effect on moisture conservation particularly in this dry and desicating zone. The compacted soil does not permit the precious rain water to percolate readily to sub-soil depths. The digging out of every stump and root ploughing and loosing every bit of land before planting is a peramount requisite for success of the desired degree. In fact that is what is being done when an area is given for Kumri cultivation and all past ventures undertaken with Kumri have been crowned with success. For these considerations it is necessary, wherever possible to raise plantations under Kumri. However, this does not preclude the possibility of the work being taken up departmentally on the personel interest and initiative of the local staff on the same intensive lines employing tractors, if there is no response for Kumri.

275. The area that will be cleared for artificial regeneration, contain generally poor growth and is unlikely that it will be saleable, and the work therefore in all probability will have to be done departmentally, or through Kumridars. The details of areas newly included under this working circle and proposed for regeneration during the plan period is given in the tabular statement given in section 6.

276. *Survey and demarcation.*—Survey and demarcation of the years coupe for regeneration will be done during May-June of the previous year. Where the areas are to be allotted to the Kumridars for carrying out preparatory works, division of the area both in the field and in the map should be completed by August and areas handed over to them after completing all formalities required for allotment of area for kumri cultivation.

277. *Site preparation.*—Clearfelling of the growth whether departmentally or through the agency of contractors should be completed before the end of December of the previous year. As the growth is poor it is unlikely that it will be saleable and the work therefore in all probability will have to be done only departmentally. All available fuel should be stacked and sold at regular intervals. In case there is no fuel available in the area, the site may be handed over to the kumridar for clearing and uprootal work. Uprootal work should be completed by March end and the area kept ready for ploughing at the onset of rains. Ploughing should be done preferably with tractors upto a depth of 15cm. to 25cm. In hilly regions where ploughing is not possible hand hoeing shall be done.

278. *Nursery technique.*—The nursery should be located as far as possible nearer to the planting site. It should be located on a site where perpectual water supply is assured.

279. As many of the tree species are found locally, fresh seeds should be collected from well grown mother trees. For species that are not locally available as in the case of Acacia planifrons, advance action to procure them in time in sufficient quantities may be taken. As the container seedlings should be 8 to 9 months old for planting out, container plants should be raised by December of the previous year. The size of the polythene containers should be 13cm. x 25cm. of 200 gauge. The container soil used should be preferably of red loam mixed with sufficient farm yard manure. The soil should be well compacted in the bags and then sown with treated seeds. As the species recommended are raised straight away in the containers by direct sowing of seeds, there is no need for raising mother beds normally. Before sowing in container bags the container soil shold be watered sufficiently. The polythene bags filled up with soil are prone to tear of it kept in the sun without watering. This should be avoided.

280. Watering the container seedlings should be done twice daily for a period of 60 days from date of sowing and thereafter once daily for a further period of 60 days. After 120 days it is sufficient if the watering is done once in alternate days till the container plants are planted out on the day of planting the container plants should be watered if not drenched already by rain water, before planting out. This will help in the retention of moisture even, if there is no rain subsequent to the panting in site. While preparing the estimate for nursery work, it will be necessary to make an extra provision of 20 per cent for replacement of casualities.

281. *Shifting and grading.*—Frequent shifting of container is necessary to prevent the plants from striking root. While shifting, it is necessary to grade out the container plants, according to their height. This will help in utilisation of the bigger sized seedlings for early planting. Smaller container plants will remain in the nursery and looked after till they are used for replacement of casualties or later planting.

282. *Maintenance.*—Casualties will be replaced during the north-east monsoon period in the first year as well as in the 2nd year. Soil workng will be done to a radius of half a metre around each plant, twice during the first year and once during the second year.

283. Since many of the past plantations have failed for want of protection from browsing by cattle, it is very essential to protect the plantation atleast for a period of 5 to 6 years effectively by erecting pucca cattle proof fence and employing plot mazdoors. Wherever possible, it is better to employ residential plot mazdoors by providing them small sheds to stay permanently inside the plot. Initially a plot mazdoor may be employed for 40 hectares, subsequently as more areas are brought under plantation, he would be able to protect up to 120 hectares. Thereafter additional plot mazdoors employed on similar manner.

Section 6—Tabular statement of planting programme.

284. The following statement furnishes the planting programme Range-war prescribed under hardwood working circle and the regeneration coupes are clearly marked on the accompanying management maps. The planting work should be done in the order of sequence as marked in map. Any work not taken up during the prescribed year should be taken up in the succeeding year in the same sequence.

TABULAR STATEMENT FOR RAISING HARDWOOD (MCIS). PLANTATIONS IN TIRUPATHUR DIVISION.

Serial number and name of series and location (1)	*Choice of species.* (2)	*Year of raising.* (3)	*Coupe No.* (4)	*Area in ha.* (5)	*Rematks.* (6)
	1. *Tiruvannamalai Range.*				
1. Tippakadu Hardwood (Misc.) plantation series Tippakadu RF.	Acaciaferruginea Acacia planifrons, Red sanders, Hard wickia binata, Acacia leucophloea, Azardiracta indica etc.	1978–79	I	40·00	..
		1979–80	II	40·00	..
		1980–81	III	40·00	.
		1981–82	IV	40·00	..
		1982–83	V	40·00	..
		1983–84	VI	40·00	..
		1984–85	VII	40·00	..
		1985–86	VIII	40·00	..
		1986–87	IX	40·00	..
		1987–88	X	40·00	..
		1988–89	XI	40·00	..
			Total ..	440·00	
2. Eraiyurmalai Hardwood(Misc.) plantation series-Eraiyurmalai RF.	Do.	1978–79	I	40·00	..
		1979–80	II	40·00	..
		1980–81	III	40·00	..
		1981–82	IV	40·00	..
		1982–83	V	40·00	..
		1983–84	VI	40·00	..
		1984–85	VII	40·00	..
		1985–86	VIII	40·00	..
		1986–87	IX	40·00	..
		1987–88	X	40·00	..
		1988–89	XI	40·00	
			Total ..	440·00	
3. Kannamadai—Hardwood (Misc.) plantations series-Kannamadai R.F.	Do.	1978–79	I	40·00	..
		1979–80	II	40·00	..
		1980–81	III	40·00	..
		1981–82	IV	40·00	..
		1982–83	V	40·00	..
		1983–84	VI	40·00	..
		1984–85	VII	40·00	..
		1985–86	VIII	40·00	..
		1986–87	IX	40·00	..
		1987–88	X	40·00	..
		1988–89	XI	37·63	..
			Total ..	437·63	

Serial number and name of series and location.	*Choice of species.*	*Year of raising.*	*Coupe No.*	*Area in ha.*	*Remarks.*
(1)	(2)	(3)	(4)	(5)	(6)
4 Kavuthimalai Hardwood (Misc) plantations series. Kavuthi-Malai R.F.	Acaciaferruginea, Acaciaplanifrons, Redsanders, Hardwickia binata, Acacia leucophloea, Azardiracta indica etc.	1978 79	I	40·00	..
		1979–80	II	40·00	..
		1980–81	III	40·00	..
		1981–82	IV	40·00	..
		1982–83	V	40·00	..
		1983–84	VI	40·00	..
		1984–85	VII	40·00	..
		1985–86	VIII	40·00	..
		1986–87	IX	40·00	..
		1987–88	X	40·00	..
		1988–89	XI	40·00	..
			Total ..	440·00	..
	II. *Sathanur Range.*				
5 Radhapuram Hardwood Misc. plantations series Radhapuram R.F.	Acaciaferruginea, Acacia,planifrons Redsanders, Hardwickia binata, Acacialeucophloea, Azardiracta indica etc.	1978–79	I	40·00	..
		1979–80	II	40·00	..
		1980–81	III	40·00	..
		1981–82	IV	40·00	..
		1982–83	V	40·00	..
		1983–84	VI	40·00	..
		1984–85	VII	40·00	..
		1985–86	VIII	40·00	..
		1986–87	IX	40·00	..
		1987–88	X	40·00	..
		1988–89	XI	40·00	..
		1989–90	XII	40·00	..
		1990–91	XIII	48·00	..
			Total ..	528·00	..
6 Pinjur Hardwood (Misc.) plantation series, Pinjur R.F. "A" Block.	Do.	1978–79	I	40·00	..
		1979–80	II	40·00	..
		1980–81	III	40·00	..
		1981–82	IV	40·00	..
		1982–83	V	40·00	..
		1983–84	VI	40·00	..
		1984–85	VII	40·00	..
		1985–86	VIII	40·00	..
		1986–87	IX	40·00	..
		1987–88	X	40·00	..

Serial number and name of series and location. (1)	*Choice of species.* (2)	*Year of raising.* (3)	*Coupe Number.* (4)	*Area in hectares.* (5)	*Remarks.* (6)
		1988–89 ..	XI	40·00	..
		1989–90 ..	XII	40·00	..
		1990–91 ..	XIII	40·00	..
		1991–92 ..	XIV	40·00	..
		1992–93 ..	XV	40·00	..
		1993–94 ..	XVI	40·00	..
			Total ..	640·00	..
	III. *Chengam Range.*				
7. Mudanai Hardwood (Misc.) plantation series, Mudanai R.F.	Acacia ferruginea, Acacia planifrons, Red sanders, Hardwickia-binata, Acacia leucophloca, Azardiracta, indica etc.	1978–79 ..	I	40·00	..
		1979–80 ..	II	40·00	..
		1980–81 ..	III	40·00	..
		1981–82 ..	IV	40·00	..
		1982–83 ..	V	40·00	..
		1983–84 ..	VI	40·00	..
		1984–85 ..	VII	40·00	..
		1985–86 ..	VIII	40·00	..
		1986–87 ..	IX	40·00	..
		1987–88 ..	X	40·00	..
		1988–89 ..	XI	40·00	..
		1989–90 ..	XII	40·00	..
		1990–91 ..	XIII	40·00	..
			Total ..	520·00	
8. Ravandavady Hardwood plantation series, Ravandavady R.F.	Do.	1978–79 ..	I	40·00	..
		1979–80 ..	II	40·00	..
		1980–81 ..	III	40·00	..
		1981–82 ..	IV	40·00	..
		1982–83 ..	V	40·00	..
		983–84 ..	VI	40·00	..
		1984–85 ..	VII	40·00	..
		1985–86 ..	VIII	40·00	..
		1986–87 ..	IX	40·00	..
		1987–88 ..	X	40·00	..
		1988–89 ..	XI	40·00	..
		1989–90 ..	XII	40·00	..
		1990–91 ..	XIII	40·00	..
		1991–92 ..	XIV	40·00	..
		1992–93 ..	XV	40·00	..
			Total ..	600·00	..

Serial number and name of series and location.	*Choice of species.*	*Year of raising.*	*Coupe Number.*	*Area in hectares*	*Remarks.*
(1)	(2)	(3)	(4)	(5)	(6)
9. Muthanur Hardwood (Misc.) plantation series, Munnurmangalam R.F. "A " Block.	Acacia ferruginea, Acacia planifrons, Red sanders, Hardwickia binata, Azadiracta, indica, etc.	1978–79	I	30·00	..
		1979–80	II	30·00	..
		1980–81	III	30·00	..
		1981–82	IV	30·00	..
		1982–83	V	30·00	..
		1983–84	VI	30·00	..
		1984–85	VII	30·00	..
		1985–86	VIII	30·00	..
		1986–87	IX	30·00	..
		1987–88	X	30·00	..
		1988–89	XI	30·00	..
			Total ..	330·00	..
	IV. *Alangayam Range.*				
10 Madacaddappa Hardwood (Misc.) plantation series, M acadappa R.F.	Do.	1978–79	I	40·00	..
		1979–80	II	40·00	..
		1980–81	III	40·00	..
		1981–82	IV	40·00	..
		1982–83	V	40·00	..
		1983–84	VI	40·00	..
		1984–85	VII	40·00	..
		1985–86	VIII	40·00	..
		1986–87	IX	40·00	..
		1987–88	X	40·00	..
		1988–89	XI	33·00	..
			Total ..	433·00	..

285. *The following Statement gives the Reserve—War details of Hardwood (Misc.) plantations existing and proposed for Tirupathur division:*

Serial number and name of range. (1)	*Name of R.F. with locality.* (2)	*Regenerated area in ha.* (3)	*Prescribed area in ha.* (4)	*Total.* (5)	*Remarks.* (6)
1 Tiruvannamalai	Sorakolathur R.F.	166·40	..	166·40	..
2 Do.	Tippakkadu R.F.	160·50	440·00	600·50	..
3 Do.	Eraiyur malai R.F.	165·50	440·00	605·50	..
4 Do.	Kannamadai R.F.	80·00	437·63	517·63	..
5 Do.	Annamalai R.F.	51·00	..	51·00	..
6 Do.	Kavuthimalai R.F.	..	440·00	440·00	..
7 Sathanur	Ponniar R.F.	64·80	..	64·80	..
8 Do.	Radhapuram R.F.	131·00	528·00	659·00	..
9 Do.	Pinjur R.F. 'C' Block	103·20	..	103·20	..
10 Do.	Pinjur R.F. 'B' Block	10·20	..	10·20	..
11 Do.	Pinjur R.F. 'A' Block	..	640·00	640·00	..
12 Chengam	Mudanai R.F.	190·35	520·00	710·35	..
13 Do.	Ravandavady R.F.	71·00	600·00	671·00	..
14 Do.	Munnurmangalam R. F. A Block	88·88	330·00	418·88	..
15 Alangayam	Madacadappa R.F.	..	433·00	433·00	..

Division—Abstract.

1 Tiruvannamalai	577·40	1,757·63	2,335·03	..
2 Sathanur	309·20	1,168·00	1,477·20	..
3 Chengam	350·43	1,450·00	1,800·43	..
4 Alangayam	..	433·00	433·00	..
Total	1,237·03	4,808·63	6,045·66	..

286. A detailed list of Hardwood plantations raised in the past with certain amount of success given in Appendix XXIII.

Section 7: Other Regulations.

287. *Demarcation of plantations.*—Each Year's plantation will be demarcated by stone slabs planted at all salient corners with calender year of formation, area and coupe number inscribed on them. Name boards will also be put up at prominent places. It would also be preferable to plant distinct species other than used for planting generally along the periphery of the plantation in one row to help in distinguishing each year's plantation. For this purpose either Palmyrah or Gliricidia may be chosen.

288. *Closureto grazing.*—All regeneration areas, will be closed to grazing for an initial period of five years. Any neglect on the part protective staff should be very severly dealt with.

289. *Plantation Journals.*—Plantation journals with all detailes of work done with plotted sketch and field book should be maintained for each plantations. It is preferable to open up a single book for posting details for each series of plantations and every year's details posted in that.

291. *Control.*—The control forms furnished as an appendix to the plan should be posted upto date regularly at the end of each financial

CHAPTER VIII.

THE MINOR FOREST PRODUCE WORKING CIRCLE.

Section I—General Constitution of the Working Circle.

291. This working circle extends over all the Reserved Forests of the Division and lands under the control of Forest Department of the Division wherein offices, residential quarters of staff and rest houses are situated. This working circle includes the area falling under 'Nature Reserve'.

292. Prior to the coming into force of the Tamil Nadu Panchayat Act of 1958, the exploitation of all items of minor forest produce from the unreserves in the hills, mostly falling in Tirupathur and Chengam Ranges in the Division, used to be provided for in the working Plan and done by this Department. But these unreserves became vested with the Panchayat as per provisions of the said Act and they were excluded from departmental working. But section 72 of the Act has since been amended by the Tamil Nadu Panchayats Second Amendment and Validation Act 1970, by the insertion of a new section viz., Section 72-A, sub-section (1) of which empowers the Government to resume possession of unreserved forests in Panchayats by issue of a notification if they are required for public purposes (vide G.O. Ms. No. 2550. Rural Development and Local Administration Department, dated 18th November 1971.).

293. Accordingly action is being persued to take over these unreserves and constitute them as Reserved Forests. Pelamarathur and Kambugudi unreserves are already notified under section 26 of the Madras Forest Act of 1882 and notification of Puliyur unreserve under the section is pending. On completion of the formalities and transfer of these areas to the control of the Forest Department, they will merge in the lease units in which they lie and worked in the same manner as the rest of the areas.

Section 2—Analysis of the crops.

294. Tamarind is the most important item of minor forest produce of the Division. Other items of Minor Forest produces available in this division include, Gallnut, Pungam nut, Avaram bark, Nuxvomica, Kalakai, Nellikai, Karuveppilai, Mavali roots, Sundakai, Konnai bark, Woodapple, Elandai, Honey, Koyya, Wild Castor, Shikkai, Mango, Saraparuppu, Seethapzham, Naga Pzham, Manipungam, Sarankottai, Thethankottai, Thagaraj, Kavadupul, Thanikkai, Punnai, Manganar, Erukkanar, Kathazhainar, Kabalaipodi, Gum, Kattukodi, Jack fruit, Echam pazham, Palmyrah fruits, Piccalathimilar, Alari pushpam, Thamarai, Kungilium Ponnavarai, Thazhampoovu, Illuppai Pazham, Pattuparuthi, Nannari roots, Kajjakai, Kattu seeragam, Murukka ilai, Alilai and Mayiladi kottai, etc.

Section 3—Division of the areas.

295. As regards gall nuts and konnai bark each range (excluding Tiruvannamalai) will form the unit of sale. Tiruvannamalai Range is devoid of gallnuts and Konai bark and hence it has to be excluded from this unit. As there was no demand for Avaram and Surul bark continuously over a period of years, the Chief Conservator of Forests in No. 21017/68 D1, dated 17th March 1969 ordered that Avaram and Surul bark may be included under regular M.F.P. lease units. Regarding the other M.F.P. (Excluding gallnut and konnai bark) each Range is divided into several farms for the convenience of sale and extraction. The details of MFP farms are as follows:—

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I Tiruvannqmalai Range (1)	*Name of R. F. and Lands.* (2)
(1) Tiruvannamalai Farm	Eraiyur malai R.F., Uchimalai R.F., Annamalai R.F., Kanna madai R.F., Tippakkadu R.F., Kavuthimalai R.F., and Sorakalathur R,F.
II Sathanur Range—	
(2) Chinnaiyampertai Farm	Chinnayampettai R.F., Radhapuram R.F., Poonamali R.F. Royandapuram R.F.,
(3) Pinjur Farm	Pinjur A: 'B' 'C'. Blocks, North and South Ponniar R.Fs
(4) Valasamalai Farm	Valasamalai R.F., Nathampalli R.F., P. Swamimalai R.F., and Beemarapatti Bungalow compound trees.
III Chengam Range—	
(5) Palamarathur Farm	Palamarathur R.F., Nallapattu R.F., Tenmalai R.F., Paramandal R F excluding areas given under land leases.
(6) Mudanai Farm	Mudanai R.F., Damarakadu R.F., and Munnurmangalam R.F.
(7) Anandavadi Farm	Anandavadi R.F., Melchengam R.F., and Ravandavadi R.F.,
IV. Tirupathur Range.	
(8) Andiappanur Farm	Andiappanur R.F.
(9) Pudur Farm	A l R.F'S of Tirupathur Range excluding Andiappanur R.F.
(10) Tirupathur Farm	Andiappanur Bungalow compound, Singarapet Bungalow compound, Tirupathur Sandal godown and District Forest Office compound.
V. Alangayam Range.	
(11) Yelagiri Farm	Jolarpet R.F., Mangalam R.F., Mangalam Extension R.F., Naga luthu RF and its extension and Narasingapuram RF
(12) Vellaikuttai Farm	Vellaikuttai R.F. and its extension R.F. Nekkinamalai R.L. and Madacadappa RF .
(13) Alangayam Farm	Alangayam R.F., Poongulam R.F. Kalrapatti R.F., Inner Java R.F., (falling within Range jurisdiction). Alangayam Rangeoffice compound and other Bungalow compounds inside the Range, and from Tamarind trees on either side of Alangayam-Vellore road from miles 10¾ mile to 21st mile belonging to the department.

Section 4 Method of exploitation.

296. All M.F.P.Units will be exploited through the agency of contractor after sale by public puction,konnai bark alone will be worked on a rotation of four years one range being worked each year, excluding Tiruvannamalai Range which is devoid of this produce. Gall nuts will be leased out separately and each Range except Tiruvannamalai will constitute a lease unit.

297. At present many of the M.F.P. units are being leased to labour co-operative societies on concession as per rules. This will be continued if demand persists.

298. Whenever there is no demand in a particular year for any unit, timely action may be taken to collect departmentally important items f M.F.P. like Tamarind, Gallnut and shikkai and dispose them off before the collected materials get spoiled.

299. *Period of lease.*—The period of lease will be one year 1st July of a year to 30th June of the following year or from the date of execution of agreement to 30th June of the following year.

300. *Sale of green manure leaf coupes.*—Working of fuel coupes of one year in advance for green manure leaf as well as working of green manure leaf coupes separately have been ordered to be stopped as per Chief Conservator of Forests No. 34559/76 E3 dated 17th May 1977 in view of the Government letter No. 13010/FR V/77-1 Forests and Fisheries Department dated 22nd March 1977 to suspend clearing of natural forests. Hence no prescriptions are made for exploitation of green manure leaf in any of the Forests in this Plan.

301. *Alteration in lease Units.*—The District Forest Officer at his discretion may split up any of the lease units tnto smaller ones or may combine any of the smaller units into bigger ones and put them up for sale as circumstance may warrent.

Section 5 : Tabular Statement of Fellings.

302. *Konnai Bark.*—Exploitation will be done once in 4 years in each Range as detailed below :—

Sathanur Range	1980–81, 1984–85
Chengam Range	1981–82, 1985–86.
Tirupathur Range	1982–83, 1986–87.
Aalangayam Range	1983–84, 1987–88.

Section 6.—Subsidiary measures of improvement.

303. The minor forest produce yield from the forests of the Division, mainly from Tamarind and gallnuts, do not represent the real potential of the Division. During the past, stray attempts have been made to raise Tamarind plantations under Kumri method in Damaraikadu RF. Narasingapuram RF, Kannamadai RF and Ponniar RF and remnants of good Tamarind topes are even now seen in Narasingapuram RF., Damaraikadu RF and Ponniar RF., etc During the last plan period, in Pinjur 'B' Block, a series of Tamarind plantations have been raised. Though sufficient stocking exist in many of these plantations, for want of protection from grazing animals and after care, the planted seedlings are stunted due to repeated browsing. If protection is afforded these seedlings are bound to respond favourably. A list of Tamarind plantations raised so far is give in Appendix XX-II.

304. A healthy departure from the present trend in minor forest produce production which solely depends on what nature produces is called for. To this end prescription are laid for creation of new tamarind farms.

305. Of the various minor forest produce yielding species, Tamarind is one of the few commercially valuable species that holds out reasonably good prospects of being successfully raised in this Division. The results are best achieved if this species is raised under Kumri method. It is comparatively cheap to raise and maintain and good return is assured from its produce which enjoys popular demand. Hence it has been decided to raise this species in three centres in this Division where there will be demand for Kumri cultivation. Hence it is prescribed that all possible efforts shall be made to raise these plantations by the Kumri method and only to the extent such effort fail, departmental planting will be undertaken as a supplementary measure.

Section 7: Regulation of Artificial Regeneration operations.

306. The areas selected for regeneration in the various centres have been marked in the management maps. Statement showing the Reserve war details of Tamarind Plantations existing and proposed for Tirupathur Division and the area selected for regeneration in the various centres and the extent to be regenerated each year during the plan period and some years thereafter are furnished below:—

STATEMENT SHOWING THE RESERVE WAR DETAILS OF TAMARIND PLANTATIONS EXISTING AND PORPOSED FOR TIRUPATHUR DIVISION.

Serial number and name of Range. (1)	*Name of RF and locality.* (2)	*Regenerated area in ha.* (3)	*Prescribed area in ha. during the plan period.* (4)	*Total.* (5)	*Remarks.* (6)
1 Tiruvannamalai	Kannamadai RF.	63·25	..	63·25	..
2 Do.	Sorakolathur RF	80·00	..	80·00	..
3 Do.	Tippakadu RF	41·00	..	41·00	..
4 Sathanur	Pinjur RF 'B' Block	128·68	..	128·68	..
5 Do.	Ponnaaiar	85·14	..	85·14	..
6 Chengam	Dhamara Kadu RF	..	280·00	280·00	..
7 Tirupathur	Chinnasamudram RF	..	520·00	520·00	..
8 Alangayam	Inner Javadi RF	2·02	..	2·02	..
9 Do.	Mangalam Extn R.F.	77·00	..	77·00	..
10 Do.	Narasingapuram RF.	..	220·00	220·00	..
	Total ..	477·09	1,020·00	1,497·09	..

Division Abstract.

Serial number and name of Range.	*Namr of RF and locality.*	*Regenerated area in ha.*	*Prescribed area in ha. during the plan period.*	*Total.*	*Remks.*
1	2	8	4	5	6
1 Tiruvannamalai	.... ..	184·25	..	184·25	..
2 Sathanur	.... ..	213·82	..	213·82	..
3 Chengam	.... ..	..	280·00	280·00	..
4 Tirupathur	.... ..	..	520·00	520·00	..
5 Alangayam	.... ..	79·02	220·00	299·02	..
Grand Total	.... ..	477·09	1020·00	1,497·09	..

TABULAR STATEMENT FOR RAISIND TAMARING PLANTATIONS IN TIRUPATHUR DIVISION.

Serial *number and name of Range.*	*Name of series and location.*	*year of raising.*	*Coupe number.*	*Area in hectare.*	***Remarks.***
(1)	(2)	(3)	(4)	(5)	(6)
1. Chengam	Pudupalayam, Tamarind, Plantation series	1978–79	I	20·00	..
		1979–80	II	20·00	..
	Damaraikadu RF.	1980–81	III	20·00	..
		1981–82	IV	20·00	..
		1982–83	V	20·00	..
		1983–84	VI	20·00	..
		1984–85	VII	20·00	..
		1985–86	VIII	20·00	..
		1986–87	IX	20·00	..
		1987–88	X	20·00	..
		1988–89	XI	20·00	..
		1989–90	XII	20·00	..
		1990–91	XIII	20·00	..
		1991–92	XIV	20·00	..
	Total ..			280·00	
2. Tirupathur	Chennasamudram, Tamarind plantation series	1978–79	I	40·00	..
		1979–80	II	40·00	..
	Chennasamudram RF.	1980–81	III	40·00	..
		1981–82	IV	40·00	..
		1982–83	V	40·00	..
		1983–84	VI	40·00	..
		1984–85	VII	40·00	
		1985–86	VIII	40·00	..
		1986–87	IX	40·00	..
		1987–88	X	40·00	..

Serial number and name of Range.	*Name of series and location.*	*year of raising.*	*Coupe number.*	*Area in ha.*	*Remarks.*
(1)	(2)	(3)	(4)	(5)	(6)
(1)		(2)			
		1988–89	XI	40·00	..
		1989–90	XII	40·00	
		1990–91	XIII	40·00	..
	Total ..			520·00	
3. Alangayam	Harasingpuram Tamarind plantation series. Narasingapuram R.F., (yelagri Hills)	1978–79	I	20.00	..
		1979–80	II	20.00	..
		1980–81	III	20.00	..
		1981–82	IV	20.00	..
		1982–83	V	20.00	..
		1983–84	VI	20.00	..
		1984–85	VII	20.00	..
		1985–86	VIII	20.00	..
		1986–87	IX	20.00	..
		1987–88	X	20.00	..
		1988–89	XI	20.00	..
			Total ..	220.00	
Division Total				1020.00	

307. *Choice of species.*—Tamarind will be main species for planting as it is economically valuable and easy to raise.

308. *Survey and demarcation.*—Each years planting area will be surveyed and demarcated by the end of July of the year prior to that of planting. If the coupes contains any saleable growth, which is unlikely in most cases, it will be sold in auction.

309. *Preparatory works.*—All growth except natural minor forest produce yielding trees and sandal should be cleared before the end of December. This should be followed by burning of slash, uprooting and ploughing to a depth of 15 cms. alighning and staking and pitting. The size of pits shall be 30 cm. at an espacement of 5 m x 5 m. Preparatory works like, clearing (if not sold in auction) uprootal and ploughing and pitting shall be done by the kumridars who will be allotted sites after proper subdivision of the areas. Whenever Kumridars are not coming foreward to carry out all or any of the preparatory works, such of those items of work may be carried out departmentally and areas allotted for kumri cultivation. Where ever possiblel tractor ploughing may be preferred.

310. *Planting.*—Planting will be done during June–July after the onset of the south-west monsoon. Planting stock (container plants) should be atleast one year old if not older. Planting work shoulld be completed in as short a time as possible. This work will be done by the Kumridars free of cost. The usual practice of raising container plants in polythene bags of 13 cm x 25 cm of 250 guage may be followed. Along periphery of the plantation Gliricidia may be planted to distinguish one plantation from the other.

311. *Replacement of casualties.*—Replacement of casualties will be done during the north-east monsoon period in the first year and again during the south-west monsoon period in the second year. A standard provision of 20 per cent for replacement in the first year and 10 per cent in the second year may be made.

312. *Weeding and soil working.*—Two weeding and soil working will be done for a period of 3 years by the Kumridars.

313. *Protection of plantations.*—It is superfluous to stress the importance of protection of the plantation at least for a period of 5 to 6 years from the damages caused by grazing animals. Some of the older plantations raised in Pnjur 'B' Block and other reserved forests have not promised well due to lack of protection from grazing animals and after care though there is sufficient stocking. As such the importance of protection in addition to the need for intensive soil preparation cannot be overlooked if the species has to be successfully raised.

314. Therefore the following additional prescriptions are made without which the results are likely to be a repetition of the past poor results. The area should be regenerated under kumri method as far as possible for a period of 3 years The permit for kumri being renewed annually.

(2) The area should be effectively fenced, initially with barbed wire fence or chain link fence to be reinforced with effective live fence of either Balsa-modendron or Euphorbia species. When the live fence is effectively raised, the chain Flink fence or barbed wire fence used may be removed for uses in younger plantations.

(3) Though the plantations may be raised under kumri since the kumridars will not be available for protection once their field crop is harvested, it is essential to provide for plot mazdoors for protection work and repairs to fence, etc. It is preferable that the plot mazdoor are made to live inside the area by providing convenient shed and also by giving him the benefit of kumri cultivation inside the area. Each plot mazdoors will be able to protect up to an extent of 100 hectares of plantation area though initially he may be employed for 40 hectare to start with. As areas under plantation increases, more of them may be employed based on the need for it.

(4) After the kumridars vacate the area, a ploughing, once in two years, would be beneficial to the plantation crop till they are 8 to 10 years old.

315. *Special cultural operations in older successful plantations.*—As already stated many of the older plantations have reasonably good stocking, which if given attention, will respond favourably. The work needed in them is the enforcement of effective protection from grazing animals and occasional cultural operations like clearing of all other unwanted growth and periodical ploughing. Since these operations do not involve much work, all older plantations may be fenced in the first one or two years of the plan period after clearing all other unwanted growth and ploughed once in two years regularly for a period of 8 years to 10 years. Plot mazdoors may be immediately employed to protect them for at least another 6 years, till the plant attain height of 2 to 3 metres. There can be little doubt about the multifold return these plantations are going to yield after a period of 1 to 12 years, and any expenditure on these cultural operations is definitely justifiable.

316. *Thinning.*—The espacement adopted in this Division varied from 4 m x 4 m to 5 m x 5 m and the plants are likely to close up in course of years and will require a thinning out. A full growth tamarind trees may require an optimum crown space of about 10 to 12 m. So there is an imperative need of carrying out thinning after about 10 years of plantation to provide the necessary crown space. Further, these thinning also yield a substantial intermediate revenue. Based on these facts an espacement of 5 m x 5 m is prescribed and all older plantations will be thinned to the required spacing at the 10th year. A silvicultural thinning is recommended to select trees to be retained.

317. *Nursery technique.*—The staff of the Division are well versed with the nursery technique which is not much different from the technique for other hardwood species. A few important prescriptions are indicated below:—

(1) Tamarind does not establish by transplanting from mother beds most often. So direct sowing of 3 to 4 good selected seeds may be sown in each polythene container. Excess seedlings, more than one, germinating in the bags will be clipped of retaining only one good sized seedling in each bag after about a month of germination.

(2) one year old seedlings shall be used.

(3) Polythene container shall be 13 cm x 25 cm of 250 guage to withstand in the nursery for a long period.

(4) Frequent application of farm yard manure may be resorted to, to provide fillip to the growth or seedlings in container.

(5) Frequent shifting of containers and grading the seedlings shall be done.

(6) Provision for replacement of casualties may be made for 20 per cent in the first year and 10 per cent in the second year.

Section 8: Other regulations.

318. *Demarcation of the plantation.*—The plantation raised every year shall be demarcated by planting stone slabs at each of the four corners showing the calender year of its formation.

319. *Plantation journal.*—A plantation journal for each plantation will be maintained wherein the name of the plantation, its location, areas, nature of previous growth, details of cost of formation and further maintenance of the plantation, etc, will be recorded. Each plantation journal should contain the surveyed sketch with field book and location sketch.

320. *Accounts.*—The contractor shall furnish to the concerned Range Officer accounts of minor forests produces collected by them in detail every month.

321. *Control.*—The control forms relating to the working circle shall be posted at the end of each financial year as per the specimen forms appended.

CHAPTER IX.

GRAZING WORKING CIRCLE.

Section 1: General Constitution of the working circle.

322. The grazing working circle comprises of all the reserved forests of the division and such of the un-reserves as are administered by Forest department in relation to the forest village system subject to the provision that certain specified areas will be closed to grazing from time to time for silvicultural and other reasons.

323. The areas closed to grazing are the following:—

(1) Worked fuel coupes will be closed to grazing for a period of 5 years from the year of felling.

(2) All regeneration areas of sandal, bamboo, eucalyptus tamarind and hardwood species or any other plantation of miscellaneous species will be closed for a period or five years from the year of formation.

(3) Areas which may be closed to grazing as a punitive measure or for any other reason under the powers vested with the District Forest Officer as per provision of the Forest Manual.

(4) Area declared as "Nature Reserve" in Andiappanear Reserved Forest (Except for local cattle).

324. A notification regarding grazing will be published every year in the District Gazette in the month of May specifying in detail the areas closed to grazing.

Section 2: Division of the area.

325. *Grazing Blocks.*—Parts of the Javadis falling in Alangayam, Tirupathur and Chengam Ranges are divided into grazing blocks in persuance of the concessional grazing facilities granted to Malayalis in G.O. No. 2687, dated 3rd December 1915 and will be governed by the provisions of the Forest Village system. Statement showing details of hill villages and reserve under the forest village system in the three ranges is furnished in paragraph 53 of Part I.

326. There are altogether 43 grazing blocks which have in vogue for a long time. To remain under this system or to get out of it is a matter left to the option of the malayalis of the hill villages, but so long they remain under the village system they shall abide by the terms in every respect.

327. The system has worked well in the past and deserves continuation in future also. The malayalis are well versed with the limits of their respective blocks and therefore it is proposed to continue the system without any change.

Section 3: Method of Treatment.

328. *Regulation of grazing.*—All animals, except goats may be permitted to graze inside the forest wherever the forest village system is not in force, on payment of the fixed grazing fees. Separate prescription and regulations are laid down for grazing under the Forest Village System and cattle covered by the familier grazing permits are not allowed to graze inside any forest covered by the Forest Village System. Cattle taken along recognised paths and roads into or from patta lands inside the forest will not be regarded as tresspass.

329. In the case of unauthorised and wanton burning of forests by graziers for getting new flush of grass at the onset of monsoon, the District Forest Officer may close such areas to grazing as a punitive measure and notify them in the District Gazette.

330. Within the area selected and maintained as 'Nature Reserve' no grazing of any kind of cattle will be permitted and this will be included in the notification along with the rest of other areas closed to grazing.

331. *Validity of permits.*—The grazing year commences from 1st of July every year till the next 30th June. No distinction shall be made as local and foreign cattle in any part of the Division for any purpose in accordance with the G.O. Ms. No. Mis. 3442, Development, dated 25th July 1963.

332. *Grazing fees.*—From 1st July 1971 as per G.O. No. 17, Agriculture, dated 2nd January 1971, the following shall be the revised rate for grazing permits throughout the state:—

Sheep Re. 0.50 per head per annum.

Cattle Re. 1.00 per head per annum.

Buffaloe Rs. 2.00 per head per annum.

Ass or horse Rs. 2.00 per head per annum.

Elephant Rs. 20.00 per head per annum.

333. *Penning.*—Penning facilities shall continue to be afforded to encourage utilisation of grazing grounds in the interior forest areas. Though many of the penning sites are not utilised, provision of the following penning sites are prescribed in case of demand during the period of the plan.

Range and name of the Pen.	*Reserved Forest in which situated.*
Sathanur	
1. Pudunatham.	Ponniar.
2. Elendamara-kidai.	—do—
3. Eman Kottai.	—do—
4. Kothapadi	do—
5. Nagathurai.	—do—
6. Pudurpaingal.	—do—
Alangayam.	
7. Odaipinta.	Poongulam.
8. Sethaponam.	Alangayam.
9. Mattusathiram	Mangalam.

334. As per G.O. Ms. No. 3686, Agriculture department, dated 18th December 1969, the penning fee shall be Re. 0.05 per cattle in addition to the usual grazing fee and no distinction between local and foreign cattle shall be made in future.

335. *Removal of grass.*—In G.O. Ms. No. 2428, Agriculture Department, dated 2nd September 1971, the Government have sanctioned the removal of the monsoon grass from the Reserved Forests by ryots and co-operative milk supply unions and societies at the rate of 10 paise per headload and two rupees per cart load for a period of one year and this is being continued as per orders of the Government from time to time.

336. *Free grazing under Forest village system and refund of grazing deposits.*—Under the forest village system the Malayalis of hill villages of Tirupathur, Alangayam and Chengam Ranges are granted the concession of free grazing in their respective blocks as already furnished as per G.O. No. 2687, Revenue, dated 3rd December 1915. As per the G.O. No. 2687, the Malayalis coming under the forest village system are allowed the refund of the entire grazing fees in return for their services and co-operation in protection and working of the sandal forests and supply of labour, on payment of approved wages, for departmental works. Refunds

are liable to be reduced or completely forfeited if the protection of the forest of their blocks is unsatisfactory. The various grazing blocks will be inspected by the Range Officer or Foresters soonafter the close of grazing year to assess the degree of protection given to the blocks and co-operation given to the staff by the villagers during the grazing year which will be basis for determining the deposit amount to be forfeited, by the District Forest Officer. The usual practice of disbursing the refunds along with the fire rewards may continue.

337. The provision of the Forest village system is narrated in detail already in paragraph 48 of Part I. The main motive of the Government in offering these concessions appears to have been to prevent discontent amongst the local incumbents and keep them in good humour when the forest situated around their settlements on the hills were taken up for reservation.

338. *New admissions to Forest village system.*—If there are new applicants from amongst the Malayali villagers, who are eligible to come under the system to the District Forest Officer he may grant the request by allotting suitable area of sufficient extent to serve as a grazing block, fix the maximum number of cow units that will be permitted to be grazed and bring the list contained in concerned appendix, up-to-date.

Section 4: Method of execution.

339. Grazing will be regulated by the issue of permits subject to the usual conditions except in area covered by concessional grazing under Forest village system. Grazing permits and grass permits shall be issued by an authority not below the rank of a Forester. The permits so issued will be valid from the date of issue to the end of the grazing year in which they are issued. The grazing year commences from 1st July and extends upto 30th June of the following year and the grazing unit will be the entire Division except areas closed to grazing.

Section 5: Other regulations.

340. *Closed areas.*—A detailed notification of areas closed to grazing shall be published in the District Gazette every year in the month of May. It should also specify the conditions regulating grazing in all parts of the Division.

The area closed to grazing should be indicated by sign boards in red displayed prominently at all usual approach points to the forest.

Improvement of drinking water facilities for cattle.

341. There are number of wells and tanks in addition to rivers and stream which were constructed inside the forest specially for the benefits of cattle. A list of such wells and tanks are furnished in Appendix IV. These well and tanks should be repaired and maintained annually to provide the necessary facilities for which they are meant.

342. *Control.*—The control forms furnished in the Appendix should be posted at the end of each grazing year.

CHAPTER X.

MISCELLANEOUS REGULATIONS.

Section 1 : Fire Protection.

343. Fire occurrence is a regular feature in the division during the month of February to April or May. Fires occur mostly on the outer slopes of Javadis while the plateau region and the plains are fees effected. The plateau portions are less affected mainly because of the existence of the Forest village system which enlists the co-operation of the Malayalis who attach great sentimental value to the hill forests. By the fire reward system, definite portions of the forests are allotted to the villagers on the hills and they are paid fire rewards to the extent they protect the forests from forest fires in the areas thus allotted. This system has worked satisfactorily and will, therefore be continued.

344. The main cause of fire is the incendiarism caused by graziers who set fire during the dry months to get new flush of grass when the monsoon sets in. Occasionally fire spreads from lands on the hills newly converted for cultivation while burning the rank growth. Fires due to natural caused are rare.

345. Though most fires are ground fires, the severity of such fires cannot be under-estimated and the damage caused by it in wiping out sandal and other young, regeneration of economically important species is enormous. Many of the worked fuel coupes, located on the hill slopes get burnt frequently resulting in the non-establishment of the coppice regrowth. Mass of lantana invade such fire burnt areas and form a permanent source for repeated fires. Hence if the forest of the division are to improve atleast in the coming years, special measures are to be taken on a warfooting to fight out the recurrence of fires more effectively. The present trend to allow the Fires to spread to extinguish by itself due to the presence of natural barriers like road, ridges, streams etc., should change. Though at present prescriptions are not lacking to deal effectively the forest fires, in practice, they are never followed, though the reports may indicate otherwise.

Prompt inspection of fire burnt areas by higher officials detailed investigation into the causes of fire and steps taken by the local staff and taking severe disciplinary action on all responsible for neglect, can only improve efficiency in fire protection measures.

346. *Fire protection measures.*—Conforming to the limited resources available in the State, the following fire protective measures are prescribed in this plan. They are (1) Indirect measures involving no expenditure and aiming at the removal of the temptation to set fire to the forests wilfully; (2) Fire Fighting measures to extinguish or localise the fires after they have broken out; (3) Direct or precautionary measures by removing the inflammable materials from definite localities in the forests; and (4) Fire protection through the co-operation of villagers who depend on the forest, for their well being.

347. (1) *Indirect measures.*—One of the main causes of fire is the wilful burning of the forests by graziers or getting succulent new flush of grass after the rains. To counter this temptation on the part of graziers it is necessary to prevent recurrence of such acts by closing the area so burnt to grazing under power vested in G.O. Ms. No. 51, Development, dated 4th January 1940, as a punitive measure. The area of the reserved forests so closed shall not exceed 400 hectares at a time and the District Forest Officer, shall submit a report immediately to the Collector of the District and the Chief Conservator of Forests about such closure. It must be borne in mind that such closure to be effective must be prompt, so that the graziers do not reap the benefits of their incediarism even for a short time.

348. (2) *Fire Fighting measures.*—This involves the prompt action to be taken by the local staff at the out break of fire in a forest in his jurisdiction. The subordinates concerned should rush to the spot of fire occcurrence with a posse of men and try to put out the fire by throwing earth on it, by beating it out with branches of trees, or by setting a counter fire, to stop the spread to larget areas. He should promptly send a detailed fire occurrence report and investigate into the cause of fire and take action.

349 (3) *Direct or precautionary measures.*—This involves fire tracing of certain footpath and boundary lines well in advance of fire season to localise and prevent spread of the fires. In a vast extent of forest area, it is impracticable to carry out this work extensively and based on location of more vulnerable areas, the following few footpaths and boundaries are recommended for clearing and fire tracing. If the District Forest Officer feels that any other location requres similar operation, such areas may also be included under this operation.

350. The following statement shows the footpath and boundaries to be fire traced annually at departmental cost.

Serial number and description foot paths. (1)	*Length K.M.* (2)	*Range.* (3)
(1) Malai Tirupathur to Chinnasamudram	5.5	Tirupathur
(2) Thulinjapuram to Nadukuppam	5.5	Do.
(3) Andiappanur to Nadur	6.5	Do.
Inter reserve boundaries		
(1) Boundary of Dhamarakadu reserve where it adjoinal Mudanai and Tenmalai reserves.	10·5	Chengam
(2) The western and southern boundaies of Valasamalai reserve from south of Tettai odai in the north west corner to the point where the southern boundary meet the south west corner of Nathampalli reserve.	16·00	Sathanur
(3) The southern boundary of Nathampalli reserve.	8.5	Do.
(4) The southern boundary of P. Swamimalai reserve from the south-west corner to the point where it meets the western extremity of the Pounjipet reserve.	11.0	Do.

351. In addition all boundary lines of plantations should be maintained regularly to act as barriers to the spread of fires from any direction. Clearing of important road margins of all inflammable materials will greatly help in keeping down the occurrence and spread of fire.

(4) *Fire protection through the co-operation of villagers who depend on the forests for their well being.*

352. As already explained, under the Forest village system the hill villages are allotted specific blocks for fire protection on the Javadis. Each village has to protect a specific grazing block from the incidence of fire and in turn they are paid fire rewards annually according to the degree of successful protection. As this system has worked successfully in keeping down incidences of fire considerably, it will be continued during the period of this plan.

353. The name of reserve and the extent to be fire protected by each vilage in all the Ranges of the Division except Tiruvannamalai Range, under fire reward system are furnished in Appendix XVIII.

354. For the effective fire protection, the Malayalis were paid rewards at the rate of Rs. 5 per 100 hectares as per the Chief Conservator of Forests' reference No. 1535/63, dated 16th July 1963 and this may be continued during the plan period. Fines for bad protection shall be Rs. 10 per 100 hectares burnt. This amount shall be deducted from the amount payable as reward and balance disbursed to the villagers.

355. Since the fire season is normally over by June end burnt areas should be inspected by July and by the respective foresters and Range Officers and reward will lists submitted to the District Forest Officer. Rewards will be disbursed by the District Forest Officer or his gazetted assistant in person.

356. *Control, fire control journal.*—A bound note-book will be maintained containing information of area closed on account of fire, particulars of direct fire protection measures and details of incidence of fire in each Range. The District Forest Officers' remarks on the adequacy or otherwise of fire protective measure shall be recorded.

357. *Fire maps.*—Fire maps on a scale of 1 inch is one mile will be maintained separately for each Range. Every case of fire will be marked on the maps, serial numbers being given to the fire in chronological order. The dates of fire will also be shown on the maps. One set of map shall be used for five successive years, the fires of each year being distinctly marked with different colours of symbols.

Section 2: Wild life.

358. In exercise of the powers conferred by sub-section (1) section 37 of the Wild Life (Protection) Act of 1972 (Central Act 53 of 1972) the following areas are closed to hunting for a period of 5 years with effect from the date of publication of the notification (G.O. Ms. No. 101, Forest and Fisheries Department, dated 10th November 1975).

Tirupathur Range:
Singarapet RF.
Singarapet Extn. RF.

Mambakkam RF.
Mambakkam Extn. RF.
Inner Javadi RF (part).

Sathanur Range :
Ponniar RF.

Alangayam Range:
Poongulam RF.
Inner Javadi RF (part).
Alangayam RF.
Vellakuttai and its Extn. RFs.
Mangalam RF.
Mangalam Extn. RF.

Nagaluthu RF.
Nagaluthur Extn. RF.
Jolarpet RF.

Chengam Range:
Mudanai RF.
Damaraikadu RF.
Paramanandal RF.
Palamarathur RF.
Nallapattu RF.
Tenmalai RF.

359. As this closure will have a salutory effect on the context and condition of wild life in the above mentioned areas, it may be extended throughout the period of plan to consolidate the gains and to prevent a set back in the position.

360. The following general orders of the Government on wildlife protection will apply to this division as well:—

(1) G.O. Ms. No. 126, Food and Agriculture, dated 11th June 1963 prohibiting the killing of tigers and bears, in the whole State.

(2) G.O. Ms. No. 2720, Agriculture, dated 4th September 1969 prohibiting the killing and capturing of python in the entire State both inside and outside the Reserved Forest limits.

(3) The Wildlife Act of 1972 prohibiting the shooting of females and immature males of panther.

361. Thus the legal provisions made for the protection of wild life in the Division can be considered as sufficient. The eventual success of wildlife conservation work will however depend on the strictness, zeal and dedication with which the existing rules are enforced and hence the need for doing everything possible to secure strict enforcement of the rules cannot be over emphasized.

362. A list of wild animals and birds met with in the Division are furnished in Part I of this Plan. Bisons are reported to be found in small numbers near-about Kavalur in Inner Javadi Reserve Forest. Bears are frequently noticed in Yelagiri, Melpet and Kambugudi. Spotted deer are seen in the plain forests of all the Ranges.

363. *Crocodile Farm.*—The Tamil Nadu Government forwarded to Government of India a project report for starting a crocodile farm at Sathanur Dam and Government of India conveyed their administrative approval in their Ministry of Agriculture and Irrigation Letter No. 511012/10/74 F. Ry. (Wt)-1, dated 6th September 1976 for the implementation of the scheme at a cost of 2.40 lakhs only as non-recurring expenditure. The Government of Tamil Nadu in their G.O. Ms. No. 26, Forests and Fisheries, dated 7th January 1977 have accorded sanction of implementation of the scheme for Crocodile Breeding Farm at Sathanur Dam for non-recurring expenditure of Rs. 2.40 lakhs and for employment of staff for 5 years from the date of employment for the implementation of the detailed scheme for captive breeding of crocodile at Sathanur Dam and Rs. 45,000 per annum of recurring expenditure.

364. The Crocodile Farm has been opened in Sathanur Dam and functioning from 23rd November 1976 under the control of the Wild Life Warden, Madras. For this implementation one Range Officer, one Forester and two Forest Guards are employed.

Section 3—Nature Reserves.

365. With the denudation of forests taking place on a large scale and also due to conversion of forests into man made plantations over extensive areas, natural forests are shrinking every where in the country. At the inauguration of the project tiger, the Prime Minister mentioned. "the narrow outlook of the accountant must give way to a wider vision to the recreational educational and ecological value of undisturbed area of wilderness. It is beyond our political will and administrative ingenuity to set aside about 1 or 2 per cent of our forests in their pristine glory for this purpose".

366. In view of our increased activities in commercial forestry, a fear is expressed that the character of our natural vegetation is likely to change enormously. Though industrial forestry has to be given high priority, it is essential that some of our forests are maintained and prescribed in their pristine condition to serve as general resource bank and also as normal habitat of our wildlife.

367. With this object inview sanction was accorded for creation of a 'Nature Reserve' near Kambugudi in Andiappanur Reserve Forest in Chief Conservator's R. Dis. No. 19032/73 K4, dated 13th March 1975. This forest shall be conserved in all its aspects and no exploitation felling or regeneration operations shall be carried out to disturb, its prestine glory. An area of 730 hectares has been surveyed and demarched in Andiappanur Reserve Forest as 'Nature' Reserve.

368. A journal has to be maintained showing the following details for this 'Nature Reserve'.

1. Surveyed sketch with extent with location sketch and field book.
2. Annual rainfall data.
3. Maximum and minimum temperature details;
4. Altitude.
5. Soil and moisture conditions with details of drainage.
6. Composition of the Flora.
7. The details of the fauna.
8. Other details and factors of interest.

369. The journal shall be maintained in the District Forest Office and copies of the journal shall be sent to the Conservator of Forest, State Silviculturist and the Chief Conservator of Forests.

370. In Chief Conservator of Forests Circular No. 30/75 (Ref. No. 54715/75 W3), dated 27th September 1975, it has been permitted for removal of dead sandalwood, collection of minor forest produce and removal of dead bamboos in flowered coupes. Since the area selected as 'Nature Reserve' in Andiapanur Reserve Forest falls within the area allotted under Forest Village system and the concerned villages have no alternate grazing ground, grazing shall be allowed to a limited extent for the benefit of local cattle only.

371. In Chief Conservator of Forests' Ref. No. 49086/75-W3, dated 27th September 1975 the size and pattern of name board to be erected in this area shall be 1 m. into 2 m. size exhibiting the details as follows.

Nature Reserve.

Andiappanur—Reserve Forest.

Range—Tirupathur.

Division—Tirupathur.

Area—730 hectare.

Section 4—Buildings.

372. A list of building in the Division is given in Appendix XXVI-A. All these buildings will be maintained in good condition. Many of the staff quarters are constructed long back and are in bad condition and require proper maintenance. Sufficient funds may be provided for in the budget estimate and maintenance work carried out on priority. Similarly some of the Rest house like Pudur and Melpatti also require proper maintenance. The Rest house at Kavalur has been improved recently and is in good condition. Since Nellivasal and Kavalur Rest houses are frequented by officers on camp, bungalow watchers with knowledge of cooking would be more useful. The compound wall of Rest house at Singarapet may be improved.

373. There is a long felt need for construction of Range Office and Range Officers quarters for Chengam Range. Action to acquire sufficient extent of land in Chengam may be taken and sanction for construction of these buildings obtained from competent authority.

374. The condition of Tiruvannamalai Range Officers quarters is in a bad state. Action to get the old building dismantled and sanction for construction of new quarters at the same site may be persued.

375. A store shed with facilities for temporary stay may be constructed under proper sanction at Tirupathur as it is often found difficult to get accommodation in any of the rest houses in Tirupathur town to stay of officers and subordinates.

376. Since many of the beat staff are still without quarters, particularly on the Javadis a priority list for construction of quarters in the coming years may be prepared and as and when funds are made available, construction may be resorted to in the order of preference.

377. Very often the sandalwood godown at Tirupathur get filled up with sandalwood stock and the transport of wood from the forests of Vellore and Tirupathur Division gets suspended till the stock is disposed off. Since it is risky to keep the extracted sandalwood at the forest site for long periods it is necessary to construct a second godown at Tirupathur. There is ample space in the compound of the District Forest Officer's residence for this purpose. Steps may be taken up to send proposals for construction of the second godown.

Section 5—Roads.

378. All roads and culverts should continue to be maintained in good condition, though some of them may not be used temporarily, as these roads serve as fire breaks during the fire season and protect the valuable forests from fire damage The system of maintaining roads through gang mazdoors has worked well in this Division and shall continue during the period of the plan.

379. The Melpet Paramanandal road formed by the Engineering Division needs maintenance. This will be attended to. Similarly, Andiappanur, Kambugudi, Nellivasal Road needs repairs and this may be attended to.

Section 6—Boundaries.

380. The clearance and maintenance of the reserve boundaries shall be the responsibility of beat subordinates. But this work has suffered neglect as in some places the boundaries are found to be over grown. Necessary steps may be taken to bring the condition up-to-date and maintain it as such thereafter. Wherever the boundary has overgrown to such an extent as to warrent for carrying out the work under an estimate, such work may be done on a phased programme depending on the allotment of funds each year. The works carried out may be entered in the measurement books and check measured by the Range Officer and District Forest Officer.

381. Wherever doubts arise, particularly along the boundaries of patta lands arise, a thorough verification of the reserves and enclosures may be got done with reference to section 16 notification and revenue survey maps.

382. In many localities the cairns are dismantled and this should be got repaired as and when noticed.

383. The Reserve boundary and its lenght to be cleared are given in Appendix XXXV.

Section 7—Tanahs.

384. There are three tanahs in this Division as detailed below and they shall continue to be maintained during the period of this Plan.

Name of Range.	*Place in which located.*	*Number of staff.*	*Government order.*	*Remarks.*
(1)	(2)	(3)	(4)	(5)
1 Tirupathur	1 Singarapet	2 Forest Guards.	G.O. Ms. No. 121, Forests and Fisheries, dated 11th February 1975.	Temporary annual sanction.
	2 Andiappanur	2 Do.	G.O. Ms. No. 2581, Agriculture, dated 8th August 1961.	Permanent.
Alangayam	3 Alangayam on Alangayam Gillman Road.	2 Do.	Initially sanctioned in G.O. Ms. No. 83, dated 8th January 1959 and made permanent in G.O. Ms. No. 381, Agriculture, dated 9th February 1972.	..

Section 8—Avenue plantations.

385. A good start has been made to raise avenue plantations along minor roads of the division and maintain them, both by the Territorial Division under Drought Prone Afforestation Programme and by the Extension Forestry Division, Vellore over a distance of 35·2 K.M. in 1976. A list of roads tackled with particulars of location, species planted, etc., is given in Appendix XXI A and they have been marked on the Farm Forestry map accompanying this plan, as well.

386. This work may be extended to other roads in the Division during the period of the plan depending on the availability of funds and targets fixed annually.

387. Since the plants planted on the roadside have to be protected from damage by grazing animals and induced to grow fast, the need for providing tree guards and affording watering facilities are absolutely necessary. Based on this the follwoing prescriptions are made.

388. *Choice of species recommend.*—Tamarind, Gulmohr, Naval, Cassia marginata, Ficus religiosa, Bassia latifolia, Peltophorum ferrugineum, Pungam, Eucalyptu, etc.,

389. *Espacement.*—The present espacement of planting at 10M. intervals on either side of road is good enough and may be continued.

390. *Planting technique.*—The present technique is to plant one year old container plants of the above species in 45 cm.cube pits and providing tree guards and watering with the help of mazdoors. The variuos types of tree guards tried around the plants are :—

(1) Brush wood fence by fixing prosopis thorns or bamboo throns alround the plant. (Costing about Rs. 2 per plant).

(2) Fixing of round Baskets made of Bamboo Splits (Rs. 5 each).

(3) Fixing 4 bamboo thron padals on 4 sides (costing about Rs. 7 per plant).

(4) Fixing Baskets made of woody climbers(Rs. 8—each
(5) Simple mud wall fence (Rs. 19/—each).
(6) Random rubble mud wall fence (Rs. 25—each)
(7) Honey combed brick wall fenee (Rs. 45—each), etc.

The cheapest and effective of these tree guards is the bamboo padal fence which of course requires frequent repairing and maintenance.

391. *Watering.*—To induce accelerated growth and early establishment of the avenue plants, watering has to be done. Watering is done either by pouring water directly into the planted pits or through manipulated restricted supply of moistrue by installing mud pots with a hole (Partly under ground) to one side of the planted seedling. The latter method assures sustained moisture required for growing plant. The hole in the pot is inserted with either twisted polythene sheet obtained from the planting stock or twisted piece of cloth.

392. One mazdoor will be incharge of 2.5 KM of avenue planting for purpose of watering protection and maintenance of fence, etc. During rainy season he will attend to works like, weeding and soil working as well. He brings water from nearer sources, two pots of water tied to the cycle, in each trip and pours it in the pots installed. It takes nearly two years for the planted seedlings to attain good height growth and watering may have to be continued till the end of the second year of planting.

393. To reduce the cost of watering and maintenance at the planting site, the other alternative suggested is to grow big sized plants at the nursery site itself for a period of two years in big pots and then take them for planting out at site. This procedure may save considerable expenditure for watering as well as limit the period of maintaining a fence.

Section 9—Canal Bank Plantation.

394. There is ample scope for raising canal Bank plantations in the Division, In the year 1972, canal bank plantation was raised over a distance of 4.5 KM with Ailanthus, Eucalyptus and other miscellaneous species. This was handed over to the P.W.D. on 7th November 1975 as per the orders of the District Forest Officer in his No. 4509/74, dated 27th March 1975. Again in the year 1976 canal bank plantation was raised under Drought prone areas programmes over a distance of 5 kms. But this has not yielded any success.

395. About 45 kms. along the main canal and 18 kms. along feeder bank canals are available for future planting. If protection from grazing by cattle and watering are provided, there is no reason why these plantations should not be succeeded.

SECTION X. RAINGUAGE STATIONS.

396. The following forest rain guage stations shall continue to be maintained during the period of the plan:—

(1) Tiruvannamalai (Sorakolathur).

(2) Velanandal.

(3) Thanipadi.

(4) Singarapet.

(5) Andiappanur.

(6) Alangayam.

(7) Kottur.

(8) Melpet.

SECTION II. JURISDICTIONAL CHANGES.

397. Proposals are already there to reorganise beats which are unweildy and this may be persued. At present there is a section forester for each beat to tighten up protection and carry out departmental work.

SECTION 12. CONTROL RECORDS AND MAPS.

398. Forms for control journals and other control records prescribed to control the implementation of the prescriptions of this plan are furnished in the Appendices separately for each of the various working circles. Proper prompt postings of these forms would greatly help in assessing the extent to which the prescriptions are being implemented and also will serve as basis for devising improvements in future management.

399 Control maps on a scale 4″—one mile will be maintained to show details of areas actually planted up under sandal, Eucalyptus, Bamboo M.F.P. and Hardwood plantation working circles and fuel coupes actually worked. The various control records and the deviation statement will be written up at the end of each year and copy of each submitted to the Conservator of Forests, Salem Circle.

CHAPTER XI. ESTABLISHMENT AND LABOUR.

400. The District Forest Officer of the Division has heavy duties to perform like checking the enumeration and extraction of sandal both from Reserve and village sandal felling series, checking of fuel coupe and regeneration coupe, survey and demarcation work, inspection of regeneration works in the various working circles, inspection of fire protection works, inspection of sandal depot operations, conduct of sandal sales check-measurement of roads, building and other works, in addition to protection of the forests from sandal smuggling and other routine offences. He has also to carry out annual office inspection of Range Offices, Depot inspections every quarter, office work at Headquarters enquiries of offences, etc. He will be ably assisted by his assistant in prevention of sandalwood smuggling which is on the increase.

401. In the past the work of Sandal enumeration and extraction has suffered most in the division due to lack of special staff exclusively for the purpose. As a result this work has been done in an imperfect manner leaving huge stock of dead trees unextracted in the sandal coupes, particularly in the interior areas. To leave dead stock unremoved for years will only result in the pilferage without detection. Hence it is absolutely necessary that the work of enumeration as prescribed is done with the help of special set of staff, under the direct supervision of an Assistant Conservator of Forests.

402. It is suggested that a special set up with an Assistant Conservator of Forests three Rangers and dozen foresters is engaged for the detailed enumeration work as detailed in this plan in all the sandal coupes and a systematic perfect enumeration carried out. The extraction work can be still left with the regular staff. Necessary proposal may be sent by the District Forest Officer for this additional staff to the competent authority.

403. It is often the common practice of the staff posted in the hills to reside in the plains and go to their work spot as and when the need arises. As a result the protection of the forest, particularly with regard to safety of sandal trees and plantation crops on the hills have greatly suffered. One of the reasons, for such an attitude is the lack of proper residential accommodation for them to stay on the hills. Necessary facilities may be provided in this regard and their stay nearer to the areas of their charge may be insisted.

404. *Labour.*—The Malayalis are the most important source of labour supply especially for the works connected with sandal operations. The concessions traditionally enjoyed by them should be continue under the Forest village system.

CHAPTER XII,

SECTION 1.

405. *Financial Forecast and cost of the working Plan.*—

The financial forecast for the 10 years of the Plan Period is as follows: —

Revenue.		*Expenditure.*	
Serial number and particulars.	*Amount for ten years.*	*Serial number and particulars.*	*Amount for ten years.*
(1)	(2)	(1)	(2)
I. Eucalyptus Working Circle.			
1 By sale of 60,000 tonnes Eucalyptus (3000 ha) at the rate of Rs. 40 per tonne.	2,40,000	1 Raising Eucalyptus plantations in 685 ha. at the rate of Rs. 750 per ha.	5,13,750
II. Sandal Working Circle.			
1 By sale of 4000 tonnes sandalwood at the rate of Rs. 50,000 per tonne.	20,00,00,000	1 Expenditure on extraction of sandalwood transport charges raising of sandal plantations, rough cleaning, etc., at the rate of Rs. 1,00,000 annually.	1,0,00,000
III. Bamboo Working Circle.			
1 By sale of bamboo coupes for 6 years (1981–82 to 1986–87) at the rate of Rs. 45,000 per series for 26 series.	11,70,000	Raising bamboo plantation in 75 ha. at the rate of Rs. 500 per ha.	37,500
2 Working of departmental bamboo plantations 12 an area of 230 ha. during the plan period at an average of Rs. 750 per ha.	1,72,500	2 Expenditure of Departmental working of bamboo in plantations at the rate of Rs. 350 per ha. for 230 ha.	10,500
IV. Fuel Working Circle.			
1 By sale of fuel coupes for 5 years 1978–79 to 1987–88) at the rate of Rs. 350 per ha. for 184 ha. (It is expected that the demand for reserve series will not be for more than 5 years during the period of the plan.)	32,200		
V. Hardwood Plantations Working Circle.			
Nil.		1 Raising of Hardwood plantations in 3900 ha. at the rate of Rs. 750 per ha.	23,35,000
VI Minor Forest Produce Working Circle.			
Nil.		1 Raising of Tamarind plantations in 800 ha. at the rate of Rs. 750 per ha.	4,80,000
2 By sale of Tamarind Farm and other Forest produce for 10 years.	31,00,000	Nil.	
VII. Grazing Working Circle.			
1 By sale of Grazing permits for 10 years	8,50,000	Nil.	
VIII. Farm Forestry Plantation Working Circle.			
1 By sale of standing growth of Farm Forestry plantations at the rate of Rs. 500 per ha. for 4400 ha.	22,00,000	1 Raising of Farm Forestry plantations and employment of plot mazdoors, etc., at Rs. 300 per ha. for 4000 ha.	12,00,000
IX. Miscellaneous Sources.			
1 Realised from Miscellaneous items such as compounding fees, fines and for feitures rent of Rest houses, etc.	5,20,000	1 Expenditure for Fire protection	11,000
		2 Maintenance of Existing buildings	3,00,000
		3 Construction of new buildings	5,00,000
		4 Maintenance of Existing Roads	5,00,000
		5 Maintenance of Departmental wells	25,000
		6 Purchase of tools plants and other miscellaneous expenditure clearing of RF boundary, etc.	25,000
		7 Rents, Rates and Taxes	20,000
			13,81,000

NOTE.—Formation of new roads etc., are not included in the expenditure.

The following particulars are the cost of establishment of the Division for the Plan Period.

Sreial number and Name of the Establishment. (1)		*Expenditure Amount.* (2)
1	District Forest Officer	1,32,000
2	Assistant Conservator of Forests	69,000
3	Forest Range Officer	4,62,000
4	Foresters	11,08,800
5	Forest Guards	12,76,800
6	Head clerk	36,000
7	Accountant	31,200
8	Assistants	90,000
9	Junior Assistants	4,28,400
10	Draughtsman, Grade III	30,000
11	Steno-Typist	27,000
12	Typist	25,200
13	Peons	1,87,200
14	Jeep Driver	21,600
15	Lorry Drivers	72,000
16	Secondary Grade Teachers	75,600
17	Higher Grade Teachers	1,44,000
18	Reserve watchers	7,33,200
19	Bungalow watchers	1,40,400
20	Lorry Cleaners	46,800
21	Tractor Drivers	24,000
22	Tractor cleaner	15,600
23	Depot watchers	93,600
24	Office watchers	46,800
25	Sandalwood Clerk	54,000
26	Deputy surveyor	30,000

The following table gives an abstract of anticipated revenue and expenditure for the 10 years of the plan period.

ABSTRACT.

Serial number and name of the working circle. (1)		*Revenue.* (2)	*Expenditure.* (3)	**Remarks.** (4)
1	Eucalyptus Plantation working circle	24,00,000	5,13,750	..
2	Sanda working circle	20,00,00,000	10,00,000	..
3	Bamboo working circle	13,42,500	1,18,000	..
4	Fuel working circle	32,200	..	..
5	Hardwood Plantation working circle	..	25,35,000	..
6	Minor Forest produce working circle	31,00,000	4,80,000	
7	Grazing working circle	8,50,000	..	..
8	Farm Forestry plantation working circle	22,00,000	12,00,000	..
9	Motor vehicles maintenance	..	10,00,000	..

Serial number and name of the working circle. (1)	*Revenue.* (2)	*Expenditure.* (3)	*Remarks.* (4)
10 Miscellaneous sources	5,20,000	13,81,000	..
11 Establishment	..	54,01,200	..
12 Travelling allowance	..	10,00,000	..
13 Contingencies	..	2,10,500	..
Total	21,04,44,700	1,48,39,450	..
Average per annum	2,10,44,470	14,83,945	..

406. It is anticipated that there will be an annual surplus revenue of about Rs. 2 crores in this Division on an average. In the first few years the actual annual revenue may be slightly less than the anticipated amount and is likely to increase the later years of the plan. This also depends on the price of the main produce, viz. sandal which is fluctuating often.

SECTION 2.

The staff and cost of the Working Plan.

407. The following are the details of staff in the working Plan Division.—

STAFF.

Serial Number and name of the Establishment.	*Number.*
1 Working Plan Officer	1
2 Forest Range Officer	2
3 Foresters	6
4 Draughtsman, Grade II	1
5 Steno-Typist	1
6 Assistant	1
7 Jeep Driver	1
8 Last Grade Government Servants	3
9 Watch man	1

408. *The details of cost of the Revision of Working Plans is as follows.—*

Cost of Working Plan.

Serial number and Details. (1)	*Expenditure.* (2)
1 Pay of Officers and pay of Establishment	1,29,550·37
2 Dearness allowance	45,219·20
3 Other allowance	12,487·54
4 Travelling allowance	50,150·52
5 Works	8,489·12
6 Motor vehicles	38,346·13
7 Contingencies	24,709·92
Total	3,08,962·80

The cost worksout to Rs. 2.45 per hectare.

CHAPTER XIII

SUMMARY OF PRESCRIPTIONS

CHAPTER—I BASIS OF PROPOSALS.

Paragraph. No.

Scope.—The working plan is for the whole Tirupathur Division.

Object of Management.—(1) To conserve forests for water supply and soil conservation (2) To exploit natural resources such as sandal, fuel, bamboo and minor forest produce on silviculturally sound principles (3) To raise plantations of Eucalyptus, sandal, bamboo and tamarind and thus improve the commercial value and productivity of the different economically important species (4) To meet the domestic and grazing requirements of the public and reduce the pressure on forests for these benefits by raising large scale Village Forest Plantations and exploting them for the benefit of the local population. (5) To discharge the obligation to the Malayalis governed by the Forest Village system (6) To protect and improve wild life (7) To improve protection (8) To achieve maximum financial return per hectare on sustained yield basis.

Method of treatment.—Sandal, firewood, bamboo and Minor Forest Produce will be exploited on area basis. Sandal will be exploited departmentally and all other produce will be exploited through contractor agency. Bamboo plantations will be exploited through departmental agency. Grazing wiill be regulated by permits. Farm Forestry plantations will be raised in tank beds and poramboke lands at the disposal of Panchayats and Government. 2 to 7

Working circles.—There are eight working circle:—

(1) Eucalyptus working circles.

(2) Sandal working circle

(3) Bamboo working circle

(4) Village Forest working circle

(5) Reserve Fuel worlking circle.

(6) Hardwood Plantation working circle.

(7) Minor Forest produce working circle.

(8) Grazing working circle.

Plantations raised under afforestation of degraded forest in the previous plan periods are included under hardwood plantation working circle in this plan. 12

Period of the plan.—The plan will be for ten years from 1st April 1978 to 31st March 1988. 13

CHAPTER II—THE EUCALYPTUS WORKING CIRCLE

General constitutions.—The working circle comprises of areas prescrided for fure plantating of the species of Eucalyptus and all sueccessful existing plantations. 14 to 17

Distribution of area.—Existing Eucalyptus plantations raised till 1976-77 with results and areas proposed for future planting are furnished.

Analysis and valuation of the crop.—Plantation raised so far vary considerably and regulations of yield become more complex. 23

Method of Treatment.—Silviculture system will be clearfelling followed by natural regeneration from coppies supplemented by artificial regeneration. 24

Choice of species.—Eucalyptus hybrid in plains forests and Eucalyptus citriodora in the plateau region to be planted. 25

Rotation.—Eight years. 26

Regulation of yield.—Will be by area. 27

Method of Exucuting followings.—Natural forests to be surveyed, clearfelled uprooted and planted. 29

Agency of Exploitation.—Where there is saleable growth, through contractors agency. Where there is no saleble growth, to be clearfelled through Departmental agency or Kumridars. 31—38

Felling rules.—Saws should be used for clearfelling plantations M.F.P. yielding trees and sandal to be retained. 40

Tabular statement of fellings. Plantations to be feleled each yaer is furnished. 43

Regeneration operations.—To becarried out by Kumri method as far as possible. 44—47

Planting.—Four months old container plants to be planted on the onset of southwest monsoon. Insecticides to beadplied. Espacement of 2m x 2m to be adopted normally. 48

Nursery.—Method of raising furnished. 49

Other regulations.—Provision for extraction of oil from Eucalyptus citriodora prescribed. Plantation journal be maintained. 51—59

CHAPTER III.—SANDAL WOOD WORKING CIRCLE.

	Paragraph number.
General constitution.—This working circle comprises of all sandal bearing areas in the Division occuring in Reserved Forests, unreserved and Patta lands where sandal grows as property of Government.	60—61
Distribution of areas. The total area of the working circle is 39,924·02 hectares distributed in Alangayam, Tirupathur and Chengam Ranges mainlty.	70
Constitution of felling series.—There are 24 felling series. Each series except village felling series is divided into 3 coupes. Each coupe to be worked on a 3 year felling cycle. The village felling serirs are to be worked annually. The boundary description of coupe is furnished.	71—73
Analysis of the crop.—Incidence of spike and distributionof sandal discussed. Estimation of growing stock based of the systematic point compling done by the Resources Survey Division is furnished.	74—83
Silvicultural system.—Sandal will be exploited by Natural selection system by which only dead trees are extracted.	86
Yield:—Depends on the many natural causes and the virulence of spike.	91
Method of Executing fellings. Exploitations to be regulated by area only. Sandal extraction to be done by Departmental agency only. Extraction will be confined to dead-trees only whether standing or fallen. Dead trees whether containing heartwood or not will be extraction. Enueration will be done systematically cutting strain lines. Enumeration of trees in Patta lands and enclosures to be done an detailed register of all plantations to be maintained.	92—100
Tabular statemeen and fellings. Coupes to be worked on each felling series each year is furnished.	107
Artificial regeneration.—To be done by Kumri method only. Annual areas to be regenerated each year furnished.	
Pucca fencing around the plantations is prescribe. Espacement will be 4m x 4m.	108—118
Intensive cultural operations in sandal aereas.—Tending of natural regeneration is prescribed for all trees over one and half metre height. Series of tending plots to be tended prescribed in Inner Javadi Reserved Forests.	119—123
Nursery. Frescriptions for raising successful nursery by avoiding damping off at different stages are made.	124—126
Other regulations. Fire protection of sandal area under Forests Village system to be continued.	127
Patta Sandal. Method of extracting patta sandal is furnished. Incentive to the pattadar to protect Governmen-owned sandal trees on patta lands to be given. A register of patta sandal trees to be maintained and poses up-to-dates.	128—132
Extracting of sandal from Reserve Forests not constituted in the felling series. To be done as and when dead trees are trees are noticed.	103
Control forms. Control forms and control journal to be maintained.	136

CHAPTER IV.—BAMBOO WORKING CIRCLE.

General constitution.—This working circle will comprise of all areas where bamboos are naturally found in workable quantity and successful bamboo plantations.	137—143
Division of the areas.—There are 26 felling series distributed in all the ranges of the division except Tiruvanna-malai.	144—147
Analysis and valuation of the crop.—The over exploitation has resulted in the closure of the bamboo working till 1980–81 as the bamboos are on the verge of near eradication in all the areas.	148—154
Method of treatment—Silvicultural system.—The prevailing system of selected thinning of clumps in accordance with the felling rules is prescribed.	155
Felling cycle.—Felling cycle of three years to be followed.	156
Regulation of working.—Will be by area. Resumption of bamboo working will be from 1981–82, if the growing stockrecovers from the bad treatment of the past.	157—158
Sale units.—Each coupe will be the unit of sale. Period of lease will be from 1st April to 31st March.	159
Agency of exploitation.—Coupes will be worked through contractors agency or by paper mill agency.	160—162
Exploitation of plantations.—To be done by departmental agency only. List of plantations raised up to 1975–76 furnished.	163—165
Felling rules.—Six nature cums to be retained in each clumps. Culms less than one year not to be felled.	166—169
Tabular statement of felling.—Coupe to be worked from 1981–82 with boundary description and year of working given. Collection depots and extraction paths for each coupe are also furnished.	170

	Paragraph number.
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1 Key map	All Working circles	1"=2 miles or (1 cm=1.2672 KM).	1
2. Forest Type map	Entire Division area	Do.	1
3. Farm Forestry map	All Farm Forestry plantations so far raised	Do.	1
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3. Chengam Range	Do.	Do.	1
4. Tirupathur Range	Do.	Do.	1
5. Alangayam Range	Do.	Do.	1
5. Stock map of Sandal and Bamboo based on 1 per cent point sampling done by the Resources Survey Division, Madras—1976 for :— 1. Sathanur, 2. Chengam, 3. Tirupathur, and 4. Alangayam Ranges.	Sandal and Bamboo 1 per cent point sampling . .	Do.	4
6. Stock map of Sandal 1975–76 Mambakkam and Mottur Sandal series.	20 per cent Sandal enumeration	4"=1 mile. (1 cm=0.1584 KM).	1
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1. Pinjur R.F. " A " Block	Hardwood (Misc.) plantations working circle (proposed plantations).	4" = 1 mile or (1cm=0.1584 KM).	1
2. Pinjur R.F." B " Block	Eucalyptus, M. F. P. Tamarind plantations, Hardwood (Misc.) Plantation working circle (Existing plantations).	4"=1 mile or (1cm=0.1584 KM).	1
3. Pinjur R.F. " C " Block	Eucalyptus working circle and Hardwood (Misc.) plantation working circle.	Do.	1
4. Chinniyampettai R.F.	Fuel working circle (Worked Fuel series)	Do.	1
5. Ponnaiyar R.F. (Part)	Eucalyptus M. F. P. Tamarind Hardwood (Misc.) Plantation and Sorappanandal worked fuel felling series.	Do.	1
6. Ponnaiyar R.F. (Part)	Eucalyptus M. F. P. Tamarind, Hardwood (Misc.) plantation series (Existing plantations) and Ponnaiyar East, West and Veppur East worked fuel series.	Do.	1
7. Ponnaiyar R.F. (Part)	Fuel working circle, Veppur West and Reddiyapalayam worked fuel series.	Do.	1
8. Poomalai R.F.	Eucalyptus working circle and Hardwood (Misc.) plantation series (Existing plantations).	Do.	1
9. Royandapuram RF. and Royandapuram RF " A " Block.	Fuel working circle (Royandapuram worked fuel series).	Do.	
10 Valasamalai R.F.	Bamboo working circle (Valasamalai Bamboo series).	4"=1 mile or (1 cm. =0.1584 Km.)	1 map.
11 Nathampalli R.F.	Bamboo working circle (Nathampalli Bamboo series).	Do.	1 map.
12 Perungulathur Swamimalai R.F. . .	Bamboo-*cum*-Eucalyptus (Existing Plantations) and Fuel working circle Swamimalai worked fuel series. Bamboo working circle Swamimalai bamboo series . .	Do.	1
13 Radhapuram R.F.	Hard-wood (Misc.) Plantations series working circle.	Do.	1
	II. Tiruvannamalai Range.		
14 Kavuthimalai R F.	Eucalyptus working circle (Existing Plantations) and Hardwood (Misc.) Plantation series working circle (proposed plantations).	Do.	1

Serial number and Name of the map.	*Description of the working Circle.*	*Scale of map.*	*Number of maps prepared.*
(1)	(2)	(3)	(4)
15 Tippakadu R.F.	Eucalyptus MFP Tamarind Plantations (Existing Plantations) and hardwood (Misc.) plantation series working circle.	4"=1 mile or (1 cm.= 0.1584 Km.)	1
16 Sorakalathur R.F.	Eucalyptus MFP Tamarind (Existing Plantations) and Hardwood (Misc.) Plantation series working circle.	Do.	1
17 Eraiyurmalai R.F.	Eucalyptus MFP Tamarind (Existing plantations) and Hardwood (Misc.) Plantation series working circle.	Do.	1
18 Annamalai R.F.	Hardwood (Misc.) Plantation series working circle (Existing Plantations).	Do.	1
19 Uchimalai R.F.	RF map	Do.	1
20 Kannamadai R.F.	Eucalyptus MFP Tamarind working circles (Existing plantations) and Hardwood (Misc.) plantations series working circle.	Do.	1
	III Chengam Range.		
21 Javadi hills S.I. sheet Nos. 1 to 4 ..	Sandal and Bamboo working circles	Do.	4
	Sandal, Bamboo, Teak, soft wood and Eucalyptus-*cum*-bamboo plantations (existing) hardwood (Misc.) plantation series working circle and Mudanai worked fuel series.	Do.	1
22 Anandavadi and Melchengam R.F. ..	Eucalyptus working circle and worked fuel series ..	Do.	1
23 Damaraikadu R.F.	Eucalyptus MFP Tamarind (Proposed) and Hardwood (Misc.) plantation series working circle (Existing plantations).	Do.	1 Map.
24 Munnurmangalam R.F. "A" and "B" blocks.	Hardwood (Misc.) plantation series working circle ..	Do.	1
25 Ravandavady R.F.	Hardwood (Misc.) Plantation series working circle and Ravandavadi felled fuel series.	Do.	1
	IV. Tirupathur Range.		
26 Salem Javadi hills S.I. sheet Nos. 4 to 8.	Sandal and Bamboo working circle Fuel series, Eucalyptus working circle, Bamboo plantation series and Nature Reserve.	Do.	5
27 Chennasamudram R.F. S.I. sheet No. 7.	Sandal and Bamboo working circle MFP Tamarind working circle (Proposed).	Do.	1
	V. Alangayam Range.		
28 Salem Javadi hills S.I. Sheet No. (1 to 3)	Sandal and Bamboo working circle Fuel series (felled fuel coupes) Eucalyptus working circle, Bamboo-*cum*-Eucalyptus plantations and sandals working circle.	Do.	3
29 Yelagiri Hills S.I. Sheet No. (1 and 2). (combined).	Eucalyptus working circle, Bamboo-*cum*-Eucalyptus plantations, sandal plantations, M.F.P. Tamarind working circle (Proposed).	Do.	1
30 Madacudappah R.F.	Hardwood (Misc.) plantation series working circle ..	Do.	1
		Total ..	52 maps.

PROPOSED

WORKING PLAN

FOR

THE TIRUPATHUR FOREST DIVISION

1st April 1978 to 31st March 1988

PART - III

By

Thiru T. K. RAJAGOPALAN, I.F.S.
Deputy Conservator of Forests.

Under the Direction of
The Chief Conservator of Forests,
Madras-6.

Office of the Forest Working Plan Officer,
SALEM-636 007.

59-15—23

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APPENDIX 1.

CLIMATOLOGICAL DATA.

TIRUPATHUR (NORTH ARCOT) DISTRICT.

Month. (1)	Mean max. Tempera-ture. (2) °C	Highest Tempera ture. (3) °C	Mean Minimum Tempera-ture. (4) °C	Lowest Tempera-ture. (5) °C	Total rainfall. (6) mms	Mean rela-tive humidi-ties. (7) PER CENT.
January	30·1	31·3	13·3	11·5	005·9	78
February	31·9	34·3	15·8	12·5	000 0	87
March	35·2	36·3	20·4	16·9	000·0	86
April	35·6	38·1	21·7	20·7	000·0	[illegible]
May	37·8	46·3	22·0	21·3	000·0	[illegible]
June	34·8	36·3	21·5	20·5	00·00	[illegible]
July	31·2	33·5	20·9	20·3	261·5	84
August	29·2	32·3	21·0	20·3	224·3	80
September	29·2	31·5	21·0	19·7	040·7	79
October	28·8	31·5	20·4	16·5	041·0	78
November	28·6	30·3	18·7	15·5	113·4	83
December	28·1	30·1	15·3	13·2	034·9	75
Monthly Average	31·7	34·3	19·3	17·4	060·1	82

APPENDIX II (a).

STATEMENT SHOWING THE AVERAGE MONTHLY RAIN FALL RECORDED IN THE FOREST RAIN GAUGE STATIONS OF TIRUPATHUR DIVISION FOR THE PERIOD 1961 TO 1975.

UNITS OF RAINFALL IN MILLI METRE.

Period.	Name of Stations.					
	Melpet.		Tiruvannamalai.		Velandal.	
	Rainfall in M.M. 1961 *to* 1975.	Number of rainy days. 1961 *to* 1975.	Rainfall in M.M. 1967 *to* 1975.	Number of rainy days. 1967 *to* 1975.	Rainfall in M.M. 1968 *to* 1975.	Number of rainy days. 1968 *to* 1975.
January	11·63	1·13	2·08	0·44	0·40	0·25
February	8·67	0·40	3·33	0·22	0·81	0·38
March	3·38	0·33	6·86	0·33	0·28	0·13
April	12·88	0·93	8·22	0·56	2·75	0·88
May	51·88	3·47	15·08	2·78	4·74	2·00
June	37·91	2·71	21·41	2·84	10·53	2·37
July	73·14	5·14	25·44	3·22	2·39	1·63
August	183·49	7·79	56·96	4·56	17·37	5·13
September	126·24	8·50	36·61	6·11	36·34	5·00
October	168·87	8·07	91·39	7·90	18·23	7·13
November	42·82	3·71	80·57	4·67	83·86	7·25
December	51·41	3·14	25·44	3·67	23·83	5·86
Average per Year	772·32	45·32	373·99	37·30	201·53	38·01

Period.	Name of stations.					
	Thanipadi.		Singarapet.		Andiappanur.	
	Rainfall in M.M. 1961 *to* 1975.	Number of rainy days. 1961 *to* 1975.	Rainfall in M.M. 1961 *to* 1975.	Number of rainy days. 1961 *to* 1975.	Rainfall in M.M. 1961 *to* 1975.	Number of rainy days. 1961 *to* 1975.
January	7·09	0·40	0·52	0·7	0·61	0·3
February	1·17	0·13	1·53	0·5	..	..
March	1·15	0·13	0·63	0·6	4·08	0·9
April	1·33	0·13	2·63	1·5	14·74	2·8
May	52·17	2·47	31·03	5·1	44·54	6·1
June	20·71	1·13	21·21	3·6	27·55	3·7
July	51 31	2·53	24·33	5·1	56·41	6·1
August	72·97	3·80	21·64	6·7	87·37	8·9
September	97·90	4·47	72·49	8·0	107·18	8·7
October	152·93	7·13	81·15	10·7	86·03	8·1
November	72·19	7·20	20·6	5·6	40·61	4·7
December	80·24	3·20	48·48	3·9	28·71	5·0
Average per year	611·16	29·72	325·70	52·0	497·83	55·3

RAINFALL STATEMENT—FOREST RAIN GAUGE STATION—*cont.*

Period.	*Name of stations.*			
	Alangayam.		*Kottur (Elagiri).*	
	Rain fall in m.m. 1961 *to* 1975.	*Number of rainy days.* 1961 *to* 1975.	*Rainfall in m.m.* 1961 *to* 1975.	*Number of rainy days.* 1961 *to* 1975.
January	0·77	0·2	..	..
February	1·12	0·2	..	..
March	1·46	0·3	..	..
April	16·52	3·2	..	..
May	53·00	5·7	53·87	2·75
June	42·27	4·2	95·85	6·75
July	70·56	7·7	147·02	5·75
August	72·14	8·7	192·87	6·50
September	88·44	8·5	189·20	7·75
October	109·64	9·6	188·52	11·75
November	46·87	5·6	34·67	2·25
December	46·78	4·2	60·75	3·25
Average per year.	549·57	58·1	962·75	46·75

APPENDIX II(b).

STATEMENT SHOWING THE AVERAGE MONTHLY RAINFALL RECORDED IN THE NON-FOREST RAIN GAUGE STATIONS OF TIRUPATHUR DIVISION FOR THE PERIOD 1961–1975.

(UNITS OF RAINFALL IN MILLIMETRES).

Periods.	*Name of stations.*					
	Chengam.		*Tiruvannamalai.*		*Sathanur.*	
	Rain all in M.M. 1961 *to* 1975	*Number of rainy days.* 1961 *to* 1975	*Rainfall in M.M.* 1961 *to* 1975	*Number of rainy days.* 1961 *to* 1975	*Rainfall in M.M.* 1961 *to* 1975	*Number of rainy days.* 1961 *to* 1975
January	11·93	0·93	8·65	0·87	14·52	1·87
February	5·11	0·40	0·77	0·40	6·72	0·67
March	10·61	0·60	9·84	0·73	16·37	1·13
April	23·90	1·53	31·11	1·60	21·02	2·13
May	90·26	5·27	49·56	4·40	93·23	7·47
June	47·23	4·40	38·12	3·93	58·36	5·93
July	108·92	7·40	46·46	4·53	92·08	8·67
August	136·91	8·27	111·14	7·73	122·99	11·13
September	172·98	9·07	118·25	6·93	195·35	11·73
October	264·21	12·20	194·29	10·13	229·63	14·13
November	111·78	5·67	136·53	7·40	122·15	9·00
December	88·52	3·33	87·44	4·40	104·08	5·80
Average per year	1,072·36	59·07	832·16	53·05	1,076·50	79·66

APPENDIX II(b)—*cont.*

STATEMENT SHOWING THE AVERAGE MONTHLY RAINFALL RECORDED IN THE NON-FOREST RAIN GAUGE STATIONS OF TIRUPATHUR DIVISIONS FOR THE PERIOD 1961–75.

(UNITS OF RAINFALL IN MILLIMETRES).

Period.	*Name of stations.*			
	Tirupathur *Rainfall in M.M.* 1961 *to* 1975	*Number of rainy days.* 1961 *to* 1975	*Vaniyambadi.* *Rainfall in M.M.* 1961 *to* 1975	*Number of rainy days.* 1961 *to* 1975
January	2·6	0·5	Nil.	Nil.
February	1·47	0·2	Nil.	Nil.
March	6·55	0·6	2·10	0·30
April	29·52	2·5	Nil.	Nil.
May	119·59	7·2	92·80	7·00
June	67·80	5·4	62·86	6·00
July	101·15	7·0	169·46	8·60
August	124·57	8·4	99·20	7·00
September	158·01	10·3	193·75	7·50
October	190·71	12·3	205·62	11·25
November	91·69	5·1	45·70	2·75
December	45·37	2·9	77·45	2·5
Average per year.	938·69	62·4	948·94	54·90

APPENDIX III.

LIST OF DRAW WELLS ATTACHED TO THE DEPARTMENTAL BUILDING OF THE DIVISION.

Serial number and name of well. (1)	*Whether the supply is adequate or not.* (2)	*Year of construction.* (3)	*Cost of construction.* (4) RS. PS.	*Mode of construction.* (5)	*Remarks.* (6)
I. *Tiruvannamalai Range.*					
1 Range Officer's quarter's well	Adequate	1905	442·50	Bricklined	..
II. *Sathanur Range.*					
2 Thanipady R.H. Well	Not adequate	1913	283·00	Bricklined not adequate in summer.	..
3 Bheemarapatti . . well	Adequate	1919	132·00	Do.	..
4 Pudur Chekkady well	Not adequate	1926	404·00	Do.	..
5 Navakolli sub-line well	Do.	Not known.	301·00	Do.	..

Serial number and name of well. (1)	*Whether the supply is adequate or not.* (2)	*Year of construction.* (3)	*Cost of construction.* (4)	*Mode of construction.* (5)	*Remarks.* (6)
			RS.		
III. Chengam Range.					
6 Paramanandal Subordinates quarters well.	Not adequate	Not known.	100·00	Bricklined (Kulam poramboke.	..
7 Pudupalayam subordinates quarters well.	Adequate	1912	160·00	Do.	..
8 Kootathur R.H. well	Not adequate	1926–27	862·00	Do.	..
9 Melpet R.H. well	Adequate	1930–31	200·00	Do.	..
10 Well at Muthanoor	Not adequate	1961–62	1,006·70	Brick in L.M. and plastered with C.M.	..
IV. Tirupathur Range.					
11 Singarapet R.H. well	Adequate	1916	144·00	Bricklined	..
12 Andiappanur R.H. well	Do.	1916	144·00	Do.	..
13 District Forest Office well	Do.	1926	100·00	Do.	..
14 Inspection shed at Sherkanur	Do.	1929	383·00	Brick and cement lined.	..
15 Nellivasal R.H. well	Do.	1933–34	230·00	Burnt Brick in mud lining.	..
16 Kambugudi R.H. Well	Do.	1936–37	232·00	Burnt Bricks in clay lining	..
17 Well at D.F.O's Bungalow	Do.	1965–66	8,442·00	Erected the pump-set. The well belongs to the Public Works Department. But overhead tank and pumpset provided and maintained by the Forest Department.	..
18 Chinnasamudram well	Do.	1961–62	652·00	For the benefit of beat staff.	..
V. Alangayam Range.					
19 Forest Range Office well	Adequate	1923	146·00	Bricklined and cement plastered.	In Range Office compound.
20 Kavalur tube well	Do.	1922	2,279·00	Tube well.	Overhead tank constructed and attached to the tube well.
21 Kottur R.H. well	Do.	1930	1,007·00	Bricklined and cement plastered.	Lies in the village.
22 Mittur sub-line well	Not adequate	1913	40·00	Bricklined	Attached to subordinates quarters.
23 Alangayam subordinates quarters well.	Do.	1961	1,004·00	Brick work and cement plastered.	The water supply is not adequate in summer.
24 Poongulam subordinates quarters well.	Adequate	1963	1,709·25	Brickwork and lime mortar plastered.	It requires some improvement

TABULAR STATEMENT OF PLANTING.

Year of planting.	Coupe No.	*Name of planting series and extent of annual regeneration areas.*					
		Ramasamudram Series.		*Tiruttani series.*		***Chingleput series.***	
		Area in hec.	***Name of R.L.***	*Area in hec.*	*Name of R.L.*	*Area in hec.*	*Name of R.F.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1976 ..	.. I	**40·00**	**Kasimbedus Bit I**	10·90	**Koramangalam**	40·00	Acharapakkam.
			Bit II	29·10	Do.		
1977 ..	.. II **Bit I**	15·00	Do.	**44·00**	Do.	40·00	Do.
	Bit II	14·00	Do.				
1978 ..	.. **III**	**40·00**	Do. **Bit I**	22·50	Do.	40·00	Do.
			Bit II	17·50	Do.		
1979 ..	.. **IV**	**34·60**	**Do.**	37·60	Do.	40·00	Do.
1980 ..	.. **V**	**45·40**	**Gollalakuppam** ..	39·30	Do.	40·00	**Do.**
1981 ..	.. **VI**	**45·00**	Do.	**40·00**	Do.	40·00	Do.
1982 ..	.. VII	**46·20**	Do **Bit I**	27·20	Do.	40·00	**Hanumanthaputheri.**
			Bit II	14·30	Do.		
1983 ..	.. III	40.00	Do. Bit I	30.50	**Koramangalam**	40.00	Do.
			Bit II	7.50	Do.		
1984 ..	.. IX	**40.00**	Do. Bit I	20.20	T.C. Kandigai South	40.00	Paranur
			Bit II	8.80	T.C. Kandigai North		
1985 ..	.. X	40.00	Do. Bit I	11,90	**Tadur**	**40.00**	Do.
			Bit II	32.95	Do.		
1986 ..	.. XI Bit I	**22.70**	Do.	46.00	Do.	33,70	**Do.**
	Bit II	**17.30**	**Do.**		Bit I	**22,40**	**Do.**
1987 ..	.. XII	**40.00**	Do.	41,30	Do. Bit II	27,30	**Appur**

TABULAR STATEMENT OF PLANTING—*Contd.*

Year of planting.	Coupe No.	Name of planting series and extent of annual regeneration areas.					
		Konasamudram Series.		Tirupathi Series.		Chingleput Series.	
		Area in hec.	Narme of R.L.	Area in hec.	Name of R. L.	Area in hec.	Name of R.F.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
988 ..	.. XIII Bit I	16.50	Do. Bit I	8.70	Do. Bit I	13.60	Hanumanthaputheri
			Bit II	5.14	Do.		
	Bit II	16.90	Do. Bit III	3.16	Do. Bit II	32.00	Do.
1989 .	.. XIV	46.60	Do.	40.00	Do.	31.00	Do.
1990 ..	.. XV	29.80	Paduthalam Bit I	15·00	Do.	40.00	Do.
			Bit II	23.45	Do.		

429. The annual coupes have been marked on the detailed management map of the working circle.

SECTION 6 – REGULATION OF REGENERATION OPERATIONS.

430. *Survey and Demarcation of the annual coupes.*—Considering that the coupe is to be permanently demarcated *vide* paragraph 445—and is to be exploited when the plantation reaches maturity, the entire annual coupe will be laid out on the ground in accordance with its lay out in the detailed management map, and if for any reason the entire coupe is not planted during the year, the unplated portion will be planted up in the following year on the same principle that an unworked portion of a fuel coupe is worked in the following year so that redemarcation at the time of exploitation and normalisation of the series at a later date does not arise. Further, a difference of one year in the age of the crop will not make any difference in its even—agedness.

431. While surveying the coupe, shrub growth that may exist along its boundary will be cleared to a width of 2 metres and small white washed cairns constructed at the salient points of the boundary pending final demarcation with stone slabs. Survey and demarcation will be completed by the end of April of the year of planting.

432. *Soil conservation measures.*—Elaborate soil conservation measures are not prescribed as a measure of economy, but gully plugging will be done wherever necessary starting from the top and proceeding downwards.

433. *Espacement.*—The espacement to be adopted will be 3 metres by 3 metres.

434. *Aligning and marking.*—Aligning and marking will be done immediately after survey and demarcation and will commence 5.49 meteres (18 feet) away from the boundary.

435. *Preparation of the planting site.*—All growth other than that of valuable species found surviving within a radius of 75 cm. from the centre of the regeneration patch will be uprooted in order to minimise root competion and fire hazard while at the same time facilitating increased percolation of rain water at the site of planting. If any useful tree species is found growing in or near the regeneration patch uprootal of obnoxious growth will be confined to a radius of 75 cm. around such advance growth and the patch skipped for artificial planting. All stones found at the site should be arranged on the lower side of patch in the form of a crescent shaped bund to prevent any washout of the regeneration patch. In plains portions clearance and uprootal of valueless growth, burning and ploughing may be done.

436. *Pitting*—Pitting will be done as the first South—West monsoon showers are received in June and completed by the end of the month. The size of the pits will be 40 centimetres cube.

437. *Planting season.*—The planting season will commence from June-July depending on the adequacy of rain for the purpose. It hardly needs emphasising that satisfactory results can be achieved only by planting early in the growing season which commences with the onset of the south-west monsoon and it is a measure of the District Forest Officers competence to gear up the administrative machinery and sufficiently enthuse it to achieve this ideal.

SECTION 7—NURSERY.

438. The planting stock consisting of container plants will be raised in conveniently located nurseries. The various nursery operations will be so timed that one year old container plants 40 to 45 centimetres tall and with woody stems are got read by the time planting is due to commence. The container plants will be raised by pricking out from mother beds or direct dibling depending on whether the partoicular species can stand pricking out or not. The ploythene containers should be 25 cm. X 13 cm. and of 200 guage thickness. The soil used in the containers should be a red loam with an admixture of well rotted farm yard manure in the proportion of 4 : 1. Attendant works such as fencing, watering on non-rainy days and weeding, initial shading of pricked out seedlings, shifting of container plants. timely culling out of defective plants in the containers and their replacement, and spraying of pesticider should be provided for in the estimate. It will be necessary to raise at least 20 per cent more number of container plants for replacement of casualties.

439. Fresh and good quality seed in sufficient quantities will be obtained from the DCF (G), Coimbatore, sufficiently early by placing timely indents on him.

SECTION 8 -SUBSIDIARY SIVICULTURAL OPERATIONS.

440. *Replacement of casualties.*—Replacesment of casualties will be done as and when they occur before the close of the planting seasons and during the second year. No beating up is contemplated during the third year.

441. *Weeding and soil—working.*—First year—Will be done in October at the onset of the North-East monsoon to a radius of 0·60 cm. around the plants and to a depth of 15 cm. Soil Working will be done with pickaxes.

Second year.—Will be done to the same dimensions during June—July.

Third year—Will be done to the same dimensiors but only around casualities replaced during the second year.

442. *Tending of natural regeneration.*—Tending of natural regeneration will be done whereever such regereration exists.

443. *Cutting back of obnoxious growth.*—Cutting back of obnoxious growth will be done during the second year wherever found necessary.

444. *Thinning*—The question of thinning will arise when the crop attains a height of about 12·75 metres. Considering the poor status of the sites being planted up under this working circle it is most unlikely that the plantations will attain this height during the currency of this plan. Hence no thinning is prescribed.

SECTION 9—OTHER REGULATIONS.

445. *Demarcation of Plantations.*—The plantations raised will be demarcated permentely with stone slabs planted at their four salient corners and on which the calender year of planting and area in hectares has been engraved. The inscriptions will be made on the outward facing of the slabs and painted with tar. The inscriptions will be at least 8 cm. high and 1 cm. deep. Stones plated on common boundaries will have the number and year of planting of the adjacent coupe also engraved on it. Stones planted in the plains will be 1·05 m. long, 45 cm. wide and 15 cm. thick whereas those to be planted on slopes will be 70 cm. long 30 cm. wide and 10 cm. thick.

446. *Fencing.*—The regeneration area will be fenced wherever brushwood is available for the purpose.

447. *Fire protection.*—While fire is no problem in the Chingleput series it is a major problem in the other two series where burning of grass by graziers has been traditional. It is suggested that protection from fire be ensured by securing the co-operation of the local villagers to the scheme of reafforestation and intensive partrolling by the protective staff during the fire season. If, however, this system should fail than a 5 metre wide fire line, inclusive of 1 metre wide guide lines on either side, will be traced all round the plantation except along the reserved land boundary where fire tracing will be done to a width of 5·49 metres (18 feet). Fire tracing will be completed by the end of February.

448. *Closure to grazing.*—All regenerated coupes will be closed to grazing for a period of six years including the year of regeneration. Further closure, if necessary, will be done after obtaining the concurrence of the territorial Conservator of Forests.

449. *Inspection paths.*—Easily graded inspection paths 1 metre wide will be laid out and maintained in all the plantations so as to facilitate transport of planting stock, easy access in the event of fire and inspection by officers. They should be so aligned that they link up with inspection paths in adjacent plantations.

SECTION 10—CONTROL.

450. The following control records will be maintained by the District Forest Officer and posted annually :

(i) Record of works.

(ii) Register of deviations.

(iii) Control journal.

(iv) Nursery and Plantation journals.

(v) Control map.

The manner in which these records are to be maintained is furnished in paragraph 531 to 543.

CHAPTER VI—WORKING PLAN FOR THE MINOR FOREST PRODUCE WORKING CIRCLE.

SECTION 1—GENERAL CONSTITUTION OF THE WORKING CIRCLE.

451. *Objects of management.*—The objects of management are to meet the demands of the local population for minor forest produce and to increase the potential of such produce in the forests.

452. *General constitution.*—This working circle will cover all the forests under the control of the Forest Department in the division but it will not cover the plantations raised under the Farm Forestry Scheme as they are generally outside the limits of the forests and their management is governed by a separate set of rules.

SECTION 2—DIVISION OF THE AREA.

453. As in the previous working plan, in dividing the area into Farms, each Range will be considered as a Farm which will be the unit of sale and exploitation. There will thus be 5 Farms named after the Ranges as follows :—

LIST OF MINOR FOREST PRODUCE FARMS.

Serial number.	*Name of farm.*
(1)	(2)
1	Tiruvallur.
2	Tambaram.
3	Kelambakkam.
4	Chingleput.
5	Madurantakam.

SECTION 3—ANALYSIS AND VALUATION OF THE CROP.

454. Due to conversion of vast tracts of forest into man-made forests the natural minor forest produce potential of the division has dwindled. The main items of such produce are the usufructs of Palmyra, climbers of various species for basket making and grass of different types for brooms and thatching. While admitting that yields and revenue from minor forest produce in the division have been low one cannot help observing that what little is produced is removed unchecked by the villagers resulting in leakage of revenue. This is probably due to the practice of traditional free removals which developed when the forests were under Panchayat and Zamin control and the highly scattered nature of the relatively samll sized forest blocks which rendered working through contractual agency unremurerative. Besides, it is only the very poor amongst the villagers who resort to the forests for collection of minor forest produce to make a living. The redeeming features of this abuse which entails some loss of revenue is that nothing is allowed to go waste and that poor villagers find something to do to eke out a living during the agricultural off-season when they are hard pressed for employment. The only solution to the problem lies in increasing the production of minor forest produce by raising and maintaining farms of the same and it is suggested to the District Forest Officer that he should select suitable areas and raise such farms in future. While on the subject of raising minor forest produce farms it is suggested that the cultivation of medicinal plants, a subject that has gained considerable prominence of late, may be taken up. The species suggested are Solanum species, Dioscorea species and Vinca rosea. The necessary expertise could be obtained from the Indian Institute of Horticulture Research, Bangalore. To start with pilot-scale farms may be raised. Irrigation, manuring and watering may be resorted to if warranted. Another useful suggestion that has been made in sevaral working plans is to raise Palmyra by direct dibbling along the boundaries of forest blocks and this could profitably be taken up in the Reserved Lands in Tiruvallur Range where the boundaries otherwise are in a nebulous state.

455. The minor forest produce occuring in the division are listed out below :—

Botanical name. (1)	*Tamil name.* (2)	*Trade name.* (3)	*Part that may be exploited.* (4)
Acacia arabica	Karuvelam	Babul	Gum and fruit.
Acacia caesia	Indu	....	Bark.
Acacia leucophloea	Velvelam	Panicled acacia	Fruit.
Andropogan species	....	Broomstick grass	Stalks.
Azadirachta indica	Veppam	Neem	Fruit.
Buchanania latifolia	Saraiparuppu	....	Fruit.
Borassus flabellifer	Panai	Palmyra palm	Fruit and leaves.
Carrisa congesta	Kilakkai	Common Bengal currant.	Fruit.
Cocos nucifera	Thennai	Coconut palm	Fruits and
Cymbopogan coloratus	Mandapullu	....	Stalks.
Emblica officinalis	Nelli	Emblic myrobolam	Fruit.
Ferronia limonia	Velam	Wood apple	Fruit.
Gynnema montanum	Megali	Swallow-wort	Root.
Mangifera indica	Mamaram	Mango	Fruit.
Phoenix sylvestris	Icham	Wild date palm	Fruits and leaves.
Pongamia pinnata	Pungam	Indian beach	Fruit.
Strychnos potarorum	Theethankottai	Clearings nut tree	Fruit.
Syzygium cumin	Naval	Indian cherry	Fruit.
Tamarindus indica	Puli	Tamarind	Fruit.
Zizyphus mauritiana	Elandai	Jujube	Fruit.
....	Nochilikodi	....	Stem.
....	Avinchilikodi	....	Stem.
....	Irumbilikodi	....	Stem
....	Melagu	Bees wax	Bees wax.
....	Then	Honey	Honey.
....	Maan Kombu	Deer horns	Horns.
....	....	Remains of dead animals.	Carcass.

SECTION 4—METHOD OF TREATMENT.

456. *Agency of exploitation.*—Honey, bees wax, deer horns and valuable remains of dead animals will be exploited departmentally whereas the other items will be exploited through contractual agency.

457. *Period of lease.*—The period of lease will be the fasli year, i.e., from 1st July to 30th June.

458. *Auction sales.*—Auction sales of the farms will be held annually between the 15th of May and 15th of June.

SECTION 5—CONTROL.

459. The following control records will be maintained by the District Forest Officer and posted annually at the end of the fasli year :—

(1) Control book.
(ii) Control journal.

The manner in which these records are to be maintained furnished in paragraph to .

CHAPTER VII—WORKING PLAN FOR THE GRAZING WORKING CIRCLE.

SECTION I—GENERAL CONSTITUTION OF THE WORKING CIRCLE.

460. *Objects of management.*—The objects of management of this working Circle are:

(i) To provide adequate pasture for cattle of villages and towns in the neighbourhood of forests without prejudice to the objects of management of other working circles and basic principles of forest conservancy.

(ii) To limit the grazing capacity to the carrying capacity of the forests.

(iii) To regulate grazing and incidentally to derive some revenue by levying of a nominal licence fee for the grazing of cattle.

(iv) To improve grazing facilities.

461. *General constitution.*—This working circle will extend over the whole of this division with the exception of certain specified areas which will be closed to grazing mainly for silvicultural reasons and occasionally for other reasons.

462. The areas closed to grazing will fall under the following categories, namely :

(i) Areas permenently closed to all grazing.

(ii) Areas closed for specified periods under the provisions of this plan.

(iii) Areas temporarily close to grazing under the provisions contained in the Madras Forest Manual as a punitive measure in cases of unauthorized and wanton burning by the people of the locality.

463. *Permanent closure.*—The following areas will be closed to grazing permanently :—

(i) Areas handed over to the State Silviculturist.

(ii) Compounds of buildings located within forest limits.

464. *Closure for specified period.*—Closure to grazing for silvicultural reasons will be applied as follows :

(i) All felled coupes of the Fuel Working Circle of the previous plan will be closed for a period of six years inclusive of the year of felling.

(ii) All felled coupes of the Eucalyptus Plantation Working Circle will be closed for a period of two years inclusive of the year of felling but if blanks in them are replanted the closure will be for a period of six years inclusive of the year of felling provided the restocking is done during the year of felling.

All plantations will be closed for a period of six years inclusive of the year of planting. The same will apply to Cashew plantations in which blanks are restocked.

465. *Temporary closure.*—The following areas will be closed to grazing temporarily :

(i) Divisional experimental plots till the results are finally recorded.

(ii) Fire burnt areas provided the area so closed at a time does not exceed 202·34 ha. in one particular locality and provided a report is submitted immediately to the Collector and the Chief Conservator of Forests. The closure should be applied within a fortnight of the fire so that the culprits cattle is deprived of the tender grass that comes up in such areas. Delayed closure will only defeat the object of such closure.

466. *Regulation of grazing.*—Grazing will be regulated by the issue of permits printed in accordance with the provisions of the Tamil Nadu Forest Manual. The permits issued will be valid from the date of issue to the end of the grazing year in which they are issued. The grazing year commences from the 1st of July and extends to the 30th of June of the following year. According to the clarification issued in Chief Conservator of Forests reference R.Dis. 50794 of 1968, dated 4th November 1968 a grazing permit issued in one division is valid for the whole State.

467. *Grazing fees.*—The grazing fees to be levied (For domestic animals) are furnished below. They were sanctioned in G.O. Ms. No. 17, Agriculture, dated 2nd January 1971 for the entire State and came into force from 1st July 1971.

Description of animals. (1)	*Rate per head.* (2) RS.
Sheep	0·50
Cows and Bulls	1·00
Horses and Asses	2·00
Buffalos	2·00
Elephants	20·00

A calf still drawing milk from its mother i.e., upto about 6 months old and accompanying its mother but not driven independently will be allowed to graze free. Calves admitted free at the beginning of the year as being under six months old may be allowed to graze free for the whole of the first half of the year, but should pay a half rate for the second half-year, while calves entering the second half of the year free as being under six months may be permitted to graze free for the whole of the second half. The graziers own estimate of the age of a calf may be accepted in all but obviously misstated cases.

468. Goats will on no account be licensed to browse or admitted into any of the reserves.

469. The grazing fees will be collected departmentally as per standard practice followed all over the State. The permits will be issued by the Range Officer and the concerned Foresters Payment for permits must be made only to these officers either directly or by money order.

470. *Removal of monsoon grass*—If there is demand for monsoon grass its removal will be regulated as per the orders of Government referred to in paragraph 131.

471. ***Improvement to watering facilities.***—In a semi-arid tract like Chingleput Division the forest springs dry up during summer and the only sources of water supply within forest limits then for watering cattle are the small water tanks constructed in the past for storing rain water for the purpose. It is found that while it behoves the department to plough back a part of the grazing revenue on maintaining these tanks in a desilted condition and proper state of repair no work of the type has been done in probably the last frew decades and prescriptions to this effect in sucessive Working Plans have remained only on paper with the territorial staff paying lip sympathy to the cause. It is, therefore, postulated that the undermentioned tanks will be taken up for desilting and such repairs as are found necessary duuring the period of this plan. Only one maintenance is prescribed during the working plan period on the assumption that once the repairs are carried out by the department the villages will do the annual maintenance thereafter on their own at least for the following nine years. A time-bound programme for the work is furnished in the subjoined statement :—

STATEMENT SHOWING PROGRAMME FOR MAINTENANCE OF TANKS FOR WATERING CATTLE.

Year of maintenance. (1)	*Name of Range.* (2)	*Location of tank.* (3)
1977–78	Chingleput	Hanumanthaputheri Reserved Forest near cairn No. 28.
	Tambaram	Nallur Reserved Forest.
1978–79	Kelambakkam	Anjur Reserved Forest.
1979–80	....	Illalur Reserved Forest.
1980–81	Chingleput	Solur Reserved Forest near cairn No. 3.
1981–82	Tambaram	Vadakkupattu Reserved Forest.
		Orgadam Reserved Forest near cairns No. 15 and 16.
1982–83	Chingleput	Thirukalikundram Reserved Forest near cairns No. 41 to 44.
1983–84	Chingleput	Appur Reserved Forest.
1984–85	Madurantakam	Nemeli Reserved Forest.
1985–86	Chingleput	Kattankulathur Reserved Forest near cairn No. 49

APPENDIX V B.

DISTRIBUTION OF FOREST TYPES IN EACH RANGE WAR ABSTRACT.

Serial number	Name of range.	Southern tropical River fringe Forest 5A/ISI.	Dry Teak Forest 5A/CIB.	Tropical Dry mixed deciduous 5A/C3.	Southern tropical Dry deciduous scrub 5A/DSI.	Southern trtopical thorn Forest 6A/CI.	Dry Evergreen Forest unclassified.	Total area.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		IN HA.	IN HA.	IN HA.	IN HA.	IN HA.	IN HA.	IN HA.	
1	Tiruvannamalai	..	..	..	..	12,715.05	..	12,715.05	..
2	Sathanur	..	..	5,648.52	22,584.47	7,747.65	..	35,980.64	..
3	Chengam	82.24	989.52	7,232.16	10,284.16	1,091.79	7,044.45	26,724.32	..
4	Tirupathur	96.00	108.48	13,226.44	8,743.60	..	697.60	22,872.12	..
5	Alangayam	172.80	..	8,803.00	9,983.90	2,473.49	631.36	22,064.55	..
	Total for the division	351.04	1,098.00	34,910.12	51,596.13	24,027.98	8,373.41	120,356.68	..
			Area leased out to central seed farm in Chengam Range has not been classified					3,970.50	3%
Percentage on forest areas		0.3%	0.9%	27.9% (Percentage.)	41.9%	19%	7%	1,24,327.18	

APPENDIX V C.

DISTRIBUTION OF FOREST TYPES IN EACH RANGE AND R.F. OF TIRUPATHUR DIVISION.

Serial number.	*Name of Reserved Forest.*	*Southern tropical river fringe Forest 5A/ ISI.*	*Dry Teak Forest 5A/ CIB.*	*Tropical Dry mixed deciduous 5A/ C3.*	*Southern tropical Dry Deciduous scrub. 5A/ DSI.*	*Southern tropical thorn Forest 6A/Ci.*	*Dry ever green Forest unclassified.*	*Total area.*	*Remarks.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		IN HA.	IN HA.	IN HA.	IN HA.	IN HA.	IN HA	IN HA.	
	TIRUVANNAMALAI RANGE—								
	Class III Panchayat Forest.								
1	Annamalai RF	..	..	..	..	699.03	..	699.03	..
2	Eraiyur malai RF	..	..	..	..	2,147.08	..	2,147.08	..
3	Kannamadai RF	..	..	..	..	2,343.55	..	2,343.55	..
4	Kavuthimalai RF	..	..	..	..	2,826.02	..	2,826.02	..
5	Sorakolathur RF	..	..	..	..	2,306.18	..	2,306.18	..
6	Thippakadu	..	..	..	..	1,728.68	..	1,728.68	..
7	Uchimalai	..	..	..	..	664.51	..	664.51	..
	SATHANUR RANGE.								
	Class I Reserved Forest.								
1	Nathampalli R.F.	..	..	1,431·45	670·42	..	..	2,102·17	
2	Valasamalai R.F.	..	..	2,738·08	348·00	..	..	3,086·08	..
3	P. Swamimalai R.F.	..	..	1,478·99	985·36	..	..	2,464·35	..
4	Ponniar R.F.	..	..	..	19,659·18		..	19,659·18	..
5	Royandapuram R.F. A. Block	..	..	..		1,097·15	..	1,097·15	..
	Class III Panchayat Forest.								
1	Chinnaiyampettai R.F.	..	..	..	921·21	..	..	921·21	..
2	Pinjur R.F. A Block	..	..	..	..	1,006·97	..	1,006·97	..
3	Pinjur R.F. B. Block	..	..	..	..	759·21	..	759·21	..
	Pinjur R.F. C Block	..	..	..	..	348·32	..	348·32	..
5	Poomalai R.F.	..	..	..	..	1,238·70	..	1,238·70	..
6	Radhapuram R.F.	..	..	..	..	2,601·24	..	2,601·24	..
7	Royandapuram A Block	..	..	..	..	375·14	..	375·14	..
8	Royandapuram B Block	..	..	..	..	320.92	..	320.92	..

CHENGAM RANGE.								
Class I Reserved Forest.								
1 Nallapattu R.F.	..	91·68	460·32	..	..	1,439·93	1,991·93	..
2 Palamarathur R.F.	..	..	897·60	..	..	1,156·25	2,053·85	..
3 Mudanai R.F.	..	..	..	2,847·05	..	..	2,847·05	..
4 Paramanandal R.F.	..	..	..	613·84	..	..	613·84	..
5 Ravandavady R.F.	..	..	..	4,299·73	..	..	4,299·73	..
6 Tenmalai R.F.	82·24	897·84	5,636·00	743·84	..	3,983·87	11,343·79	..
7 Anandavady R.F.	Leased out for clearfelling for the Central Seed Farm so not classified.						3,346·46	—
Class III Panchayat Forest.								
1 Damaraikadu R.F.	..	..	238·24	1,779·70	..	464·40	2,482·34	..
2 Munnurmangalam R.F. A and B	..	..	..	..	1,091·79	..	1,091·79	..
3 Melchengam R.F.	Leased out for clearfelling for the Central Seed Farm so not classified.				..	..	624·04	..
TIRUPATHUR RANGE.								
Class I Reserved Forest.								
1 Singarapet R.F.	..	..	..	1,067·11	..	..	1,067·11	..
2 Chinnasamudram R.F.	..	..	..	1,149·99	..	..	1,149·99	..
3 Govindapuram R.F.	..	..	..	932·42	..	..	932·42	..
4 Singarapet R.F. Extension	96·00	108·48	1,783·91	828·84	..	..	2,817·23	..
5 Mambakkam R.F.	..	..	3,045·32	1,263·52	..	..	4,308·84	..
Andiappanur R.F.	..	..	1,405·60	2,446·32	..	..	3,852·12	..
7 Inner Javadi R.F.	..	..	6,900·96	1,055·20	..	697·60	8,653·76	..
8 Mambakkam Extension R.F.	..	..	90·65	..	..	..	90·65	..

APPENDIX V-C—co

DISTRIBUTION OF FOREST TYPES IN EACH RANGE AND R.F. OF TIRUPATHUR DIVISION—ont.

Serial number. (1)	Name of Reserved Forest. (2)	Southern tropical river fringe Forest 5A/1S1. (3) IN HA.	Dry Teak Forest 5A/C1B. (4) IN HA.	Tropical Dry mixed deciduous. 5A/C3. (5) IN HA.	Southern tropical Dry Deciduous scrub. 5A/DS1. (6) IN HA.	Southern tropical thorn Forest 6A/C1. (7) IN HA.	Dry ever green Forest unclassified. (8) IN HA.	Total area. (9) IN HA.	Remarks. (10)
	ALANGAYAM RANGE.								
	Class I Reserved Forest.								
1	Kalrapatti R.F. ..	..	..	..	831·25	..	..	831·25	..
2	Inner Javadi R.F.	172·80	..	3,252·95	..	..	631·36	4,057·11	..
3	Poongulam R.F. ..	..	..	3,230·21	494·24	..	..	3,724·45	..
4	Mangalam R.F. ..	..	..	674·56	1,786·01	..	..	2,460·57	..
5	Mangalam Extension R.F. Part I and II ..	..	..	..	1,031·98	..	..	1,031·98	..
6	Narasingapuram R.F.	..	..	..	..	885·07	..	885·07	..
7	Alangayam R.F. ..	..	..	1,645·28	3,045·19	..	..	4,690·47	..
8	Nagaluthu R.F. Extension ..	..	..	..	495·75	..	..	495·75	..
9	Nagaluthu R.F. ..	..	..	..	1,137·20	..	..	1,137·20	..
10	Jolarpet R.F. ..	..	..	..	672·20	..	..	672·20	..
11	Madakadappa R.F. ..	..	..	..	..	857·15	..	857·15	..
	Class III Panchayat Forest.								
1	Vellalakuttai R.F. ..	..	..	..	300·28	..	..	300·28	..
2	Vellakuttai Extension R.F. ..	..	..	..	189·80	..	..	189·80	..
3	Nekkanamalai R.F. ..	..	..	..	..	731·27	..	731·27	..
	Total ..	351·04	1,098·00	34,910·12	51,596·13	24,027·98	8,373·41	1,24,327·18	..

*It includes 8970.50 Hectares of Forest Areas which are not classified, since these areas were leased out for clearfelling for the Central seed farm in Anandavadi and Melchengam R.Fs.

APPENDIX V D.

LANDS OUTSIDE THE R.F. UNDER THE CONTROL OF FOREST DEPARTMENT.

Serial number and name of taluk.	*Name of the village.*	*Survey number.*	*Area in hectares.*	*Amount Paid.*		*Date of acquisition.*
				For land.	*For trees and buildings.*	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
				RS. P.	RS. P.	
Tiruvannamalai Range—						
1 Tiruvannamalai	Tiruvannamalai	903	0·76	..	..	....
Sathanur Range—						
2 Chengam	Porasapattu	102/2A1	0.040	Free	..	....
3 Chengam	Ariyakunjur	34/1	0·049	..	..	....
Chengam Range—						
4 Chengam	Paramanandal	282/4	0.667	..	..	....
	Do.	278/1	0.365	..	..	....
5 Chengam	Kuppanatham	75/2	0.380	..	..	....
	Do.	75/3	0.005	Free	..	9th February 1962
6 Chengam	Chinnasamudram	104/9B	0.13	Free	..	1st April 1958.
7 Chengam	Kakkarasanpalayam	18/2	0.276	..	..	....
8 Chengam	Veerandal	117/3	1.093	..	..	....
9 Chengam	Melchengam	39/2	0.081	Free	..	10th September 1962.
10 Chengam	Melravandavady	10/2	0.142	Free	..	7th September 1962.
11 Chengam	Muthanur	26/2	0.040	Free	..	4th September 1962.
12 Chengam	Melsilambadi	240	8.193	..	..	....
13 Chengam	Perumattam	2/2 13/18 21/2 22/22	0·235 0.348 0.291 0·089	237 70	..	10th November 1961.

APPENDIX V D—*cont.*

LANDS OUTSIDE THE R.F. UNDER THE CONTROL OF FOREST DEPARTMENT—*cont.*

Serial number and name of taluk. (1)	*Name of the village.* (2)	*File number and date of disposal.* (8)	*Name of structures of any there in.* (9)	*Name of section which is situated.* (10)	*Remarks.* (11)
Thiruvnnamalai Range—					
1 Tiruvannamalai	Tiruvannamalai	....	Forest Range Office, Forester Quarters, Range clerk Quarters, Rest house and Lavatory.	Tiruvannamalai	....
Sathanur Range—					
2 Chengam	Porasapattu	G.O. 1734, Dev., dated 17th April 1963.	Forest Guard, Reserve watcher quarters.	Arattavadi	....
3 Chengam	Ariyakunjur	....	Foresters. Forest Guard, Reserve watcher quarters.	Sorapanandal.	..
Chengam Range—					
4 Chengam	Paramanandal	....	Combined Forester. Forest Guards quarters, Forest Bungalow.	Paramanandal.	....
	Do.	....	Combined Quarters	Do.	....
5 Chengam	Kuppanatham	....	Forest Guards and reserve watcher quarters (Tirupathur Range).	Cheyyar	Including temple and poramboke
	Do.	D.F.O's No. 11854/59, D, G.O. Ms. 630, R.D, dated 9th February 1962.	Subordinates Quarters	Cheyyar	....
6 Chengam	Chinnasamudram	Rc. 4866/57 D, dated 18th September 1962.	Subordinates Quarters	Paramanandal	....
7 Chengam	Kakkarasanpalayam	....	Forest Guard and watcher quarters.	Pudupalayam	Damarai and Mudanai beat.
8 Chengam	Veerandal	....	Forest Guard and watcher quarters.		
9 Chengam	Melchengam	DFO No. 875, 59 D, G.O. Ms. No. 3940.	Forest Guard and watcher quarters.	Anandavady	....
10 Chengam	Melravandavady	G.O. Ms. Rev. 3763, dated 7th September 1969.	Forest Guard and watcher quarters.	Ravandavady.	....
11 Chengam	**Muthanaur**	DFO No. 5794/60 D, G.O. Ms. 3389, dated **4th September 1963.**	Forest Guard and watcher quarters.	**Chayyer**	....
12. Chengam	Melsilambadi	..	Subordinates quarters, Forest bungalow,	Kuttathur	....
13. Chengam	**Peramattam**	DFO No. 9008/62D, RDO No. 24962/61LD, G.O. No. 1734/Rev., dated 17—4—1963.	Subordinates quarters.	Do.	....

APPENDIX V D—*cont.*

LANDS OUTSIDE THE R.F. UNDER THE CONTROL OF FOREST DEPARTMENT—*cont.*

Serial number and name of taluk.	*Name of the village.*	*Survey number.*	*Area in hectares.*	*Amount Paid.*		*Date of acquisition.*
				For land.	*For trees and buildings.*	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Tirupathur Range.				RS. P.	RS. P.	
14 Tirupathur	Pudurnadu	21/1	0·918	187·65	..	14th November 1916.
15 Tirupathur	Nellivasal	6/IB	0·182	36·20		4th June 1919.
16 Tirupathur	Mambakkam	569	0.404	..	..	20th August 1920.
17 Tirupathur	Tirupathur Town	194/2	0·303	..	..	7th September 1975.
18 Tirupathur	Tirupathur ward I-Block 24	345 346 339/1	0·025 0·101 0·725	.. .. ..	.. .. ..	.. .. ..
19 Tirupathur	Pungampattu	306/2	0·121	..	..	15th May 1920
20 Tirupathur	Nellivasal	6/3	0·182	..	..	15th May 1920.
1 Tirupathur	Andiappanur	59	1·214		..	..
22 Tirupathur	Tirupathur	339/1A-1B	0·088	..	..	14th March 1930.
23 Tirupathur	Nellivasal	6/1A2	0·012	..	..	29th April 1932.
24 Tirupathur	Tirupathur	349/8	47·845 sq.m.	..	..	2nd August 1938.
25 Uthangarai	Singarpet	16/2	0·352	..	..	..
26 Tirupathur	Tirupathur	339/3	0·907	..	..	4th March 1936.

APPENDIX V D—*cont.*

LANDS OUTSIDE THE R.F. UNDER THE CONTROL OF FOREST DEPARTMENT—*cont.*

Serial number and name of taluk. (1)	*Name of the village.* (2)	*File number and date of disposal.* (8)	*Name of structures of any there in.* (9)	*Name of section which is situated.* (10)	*Remarks.* (11)
Tirupathur Range.					
14 Tirupathur	Pudurnadu	Cur. 1579 of 15 Dis. 14 R/ 25th July 1917.	For Rest House at Padur and out house.	Matrapalli	..
15 Tirupathur	Nellivasal	49/sc of 19 R. Dis 11/R of 19 dated 17th September 1919.	Subordinate Qrs. at Nellivasal	Singarapet	..
16 Tirupathur	Mambakkam	R. Dis 765/ 20D dated 6th December 1920.	Dismantled inspection shed	Matrapalli	Transferred from Govt.) to Forest Poramboke.
17 Tirupathur	Tirupathur Town	File No. 5046/58D	..	Matrapalli	In Municipal records the S. No. 194/ 2 of Tirupathur was noted as forest Poramboke
18 Tirupathur	Tirupathur ward I-Block 24	R. Dis 1262/24	D.F.O. Office Range Office including sandal wood godown.	Matrapalli	Transferred from Govt. to Forest poramboke
19 Tirupathur	Pungampattu	Do.	Inspection shed at Thagarakuppam.	Paramanandal	Do.
20 Tirupathur	Nellivasal	Do.	Inspection shed at Nellivasal	Singarapet	Do.
21 Tirupathur	Andiappanur	Do.	Rest Hosue at Andiappanur	Andiappanur	Do.
22 Tirupathur	Tirupathur	R. Dis. 4630/1932.	Forest store house	Matrapalli	Do.
23 Tirupathur	Nellivasal	R. Dis 31004/1931	Well	Singarapet	Transferred to well Promboke.
24 Tirupathur	Tirupathur	R. Dis. 2269/D-1938	Compund wall for Godown	Matrapalli	Transferred from Government.
25 Uthangarai	Singarapet	..	Rest House	Singarapet	..
26 Tirupathur	Tirupathur	R. Dis, 1371D/1935	Forest Office and Sandalwood godown.	Matrapalli	Transferred from Government.

APPENDIX V D—*cont.*

LANDS OUTSIDE THE R.F. UNDER THE CONTROL OF FOREST DEPARTMENT—*cont.*

Serial number and name of taluk.	*Name of the village.*	*Survey number.*	*Area in hectares.*	*Amount Paid.*		*Date of acqisition.*
				For land.	*For trees and buildings.*	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
				RS. P.	RS. P.	
Alangayam Range.						
27 Vaniyambadi	Peddur	215/2B	0–01	Free	..	17th April 1924.
28 Vaniyambadi	Peddur	213/B	0–50	..	..	..
29 Vaniyambadi	Mittoor	432/2	0–10	..	..	..
30 Vaniyambadi	Bhimakulam	67/1C	0–14 0–08	17 50	..	3rd November 1916. 6th March 1938.
31 Vaniyambadi	Peddur	215/2A-2	0–16	..	..	..
32 Vaniambadi	Poongulam	128/1	0–06	Free	..	..
33 Tirupathur	Yelagiri	69/1A	0–214	16 65	..	21st January 1915.
34 Tirupathur	Andiappanur	749/B	0–121	4 97	..	12th May 1913.
35 Tirupathur	Andiappanur	58, 56, 51, 52, 615, 616, 746, 747, 748, 749, 750, 804, 805, 807.	1–893	133 10	..	15th February 1910.
36 Tirupathur	Bhimakulam	67	1–051	150 34	..	6th December 1916.
37 Tirupathur	Kottur	R.S. 61 corresponding to 42 of 1	0–707	54 04	..	20th September 1908.
		S.No. 69/1A	0–234		..	23rd December 1914.
38 Tirupathur	Narasingapuram	Govt. Dry 380/2 382/2 383/1B 407/1A 407/2A 642/1			..	..
	Bhimakulam	66/2 67/1B 68/2 69/3 72/1B 72/4B	4·896	1018 08		21st December 1916.
39 Tirupathur	Alangayam	393	0–416	231 76		5th August 1923.
40 Tirupathur	Andiappanur	19A, 21, 22 23, 26, 27, 43A, 44A, 42, 45, 62, 63, 64, 61, 58.	0–662	97 26	..	6th May 1908.
	Andiappanur	19, 21, 22, 23, 26, 27, 39, 42, 43, 44, 45, 58 61, 62, 63, 64.	..	..	..	..
	No. 45 Pungampattu Nad	7-2A, 8-2, 9-2 B 10-2 B; 22-2,, 48-1B; 48-2B 49-2, 50-1B, 53-1B, 56-2. 4-2; 5-2; 6-1/4,	3-832	164 90	..	2nd August 1946.

APPENDIX V D—*cont.*

LANDS OUTSIDE THE R.F. UNDER THE CONTROL OF FOREST DEPARTMENT—*cont.*

Serial number and name of taluk. (1)	*Name of the village.* (2)	*File number and date of disposal.* (8)	*Name of structures of any there in.* (9)	*Name of section which is situated.* (10)	*Remarks.* (11)
Alangayam Range.					
27 Vaniyambadi	Peddur	R. Dis. 45323M dated 14th June 1924.	**Range Office**	Alangayam	**Transferred from Govt.**
28 Vaniyambadi	Peddur	R. Dis 1262/24	Rest House at Alangayam	Alangayam	Do.
Vaniyambadi	Mittoor	Do.	Subordinate Qrs. at Mittoor	Mittor	Do.
Vaniyambadi	Bhimakulam	R. Dis 3277/33 R. Dis, 2072/1938	Foresters Qrs. Forest Guard Qrs.	Kavalur Do.	Do. Do.
31 Vaniyambadi ;	**Peddur**	Collectors Proceedings D. Dis. 5502/38, dated 6th August 1938.	For constructing a ulvert across stream in front ofthe Range Office.	Alangayam	Do.
32 Vaniyambadi	**Poongulam**	G.O. No. 3894, dated 24th October 1962 charge taken on 18th March 1963.	Subordinate quarters	Kavalur	Do.
33 Tirupathur	Yelagiri	R. Dis. 31 of 1914; R. Dis. 6 of 1915.	Kottur Rest House Compound.	Kottur	Do.
34 Tirupathur	Andiappanur	R. Dis. 9/13, dated 27th May 1923, 1285/1916.	Andiappanur Kambugudi Road	Kavalur	Do.
35 Tirupathur	Andiappanur	Not available	Andiappanur Road Kambugudi Road.	Kavalur	..
36 Tirupathur	Bhimakulam	R. Dis. 5/18	Kavalur Rest House	Kavalur	..
37 Tirupathur	Kottur.	Not available	Kottur Rest House	Kottur	..
38 Tirupathur	Narasingapuram Bhimakulam	Do. R. Dis. 1/17	Subordinate Qrs. at Kottur For Gillman Road, Kavalur	Kottur	.. **Transferred from Govt to Forest Poramboke.**
39 Tirupathur	**Alangayam**	R. Dis. 453/23 dated 14th June 1924.	For Range Office and Rangers Qrs.	Alangayam	Do.
40 Tirupathur	Andiappanur	R. Dis. 3018/28	Andiappanur, Kambugudi Road	Kavalur	Do.
	Andiappanur	R. Dis, 3018/28	Do.		..
	No. 45 Pungampattu Nad	639/46D	Kambugudi Thagarakuppam Road.	Andiappanur	Do.

APPENDIX V D—*cont.*

LANDS OUTSIDE THE R.F. UNDER THE CONTROL OF FOREST DEPARTMENT—*cont.*

Serial number and name of taluk.	*Name of the village.*	*Survey number.*	*Area in hectares.*	*Amount Paid.*		*Date of acqisition.*
				For land.	*For trees and buildings.*	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
				RS. P.	RS. P.	
41 **Tirupathur**	No. 45 Pungampattu Nad Belur village ..	8-2, 9-2, 10-4b, 10-2A, 12-2, 26-2, 27-2.	1.864	135 38	..	..
	No. 46 Pudur Nad Pudur Hamlet ..	1-2, 3-1 (b), 3-2(a), 50-2, 51-2, 3-3(b), 11-1 (b), 10-2, (b); 11-2(6) 16-1 (b), 18-2, 19-2, 20-1, 73-2 11-1 (b), 113-2 (b), 133 -2, 134-2, 114-2; 132-2, 132-4, 135-2, 137-2(a), 137 -3(b), 141-1.	66.798	1,199 43	..	..
	No. 46, Pudur Nad Arumalpet Hamlet ..	10-2, 11-2, 36-2, (b), 36-3 (b), 38-1; 39-1 (b), 44-2, 45-2, 38-5 (b) 39-8 (b), 42-2.	2.277	483 12	..	..
	No. 46, Pudur Nad Chittoor	6-2, 11-1 (a) 12-2(a) 1-2; 2-2; 3-2, 4-2.	0.493	73 26	..	..
	No. 47, Puliyur Nellivasal Nad	17-2, 8-2, 19-1 (b), 18-2; 34-1B; 23-2; 26-1(b); 28-1(b) 31-2; 186-2; 200-2; 201-2; 202-2; 213-2 (b); 203-2; 214-2.	3.977	473 46	..	..
24 **Tirupathur**	No. 47 Nellivasal, Nellivasal Nad	114-2, 113-1/2B 99-2B, 70; 2B, 70-3B, 71-3B, 68;1B.	1.396	324 90	5.00	10th November 1958

APPENDIX V D—*cont.*

LANDS OUTSIDE THE R.F. UNDER THE CONTROL OF FOREST DEPARTMENT—*cont.*

Serial number and name of taluk.	*Name of the village.*	*File number and date of disposal.* (8)	*Name of structures of any there in.* (9)	*Name of section which is situated.* (10)	*Remarks.* (11)
41 Tirupathur	No. 45, Pungampattu Nad Belur village	..	Thagarakuppam puliyur Road	Singarapet	..
	No. 46 Pudur Nad Pudur Hamlet	..	Do.	Singarapet	..
	No. 46 Pudur Nad Arumalpet Hamlet	R. Dis 2559/D49	Thagarakuppam Puliyanur Road	Singarapet	..
	No. 46 Pudur Nad Chittoor	..	Do.	Singarapet	..
	No. 47 Puliyur Nellivasal Nad	R. Dis. 2559/D-1949	Do.	Singarapet	..
42 Tirupathur	No. 47 Nellivasal, Nellivasal Nad	R. Dis. 6056/56	Nellivasal-Malayampatti Road	Singarpet	..

APPENDIX VI A.

(G.O. No. 1462, Revenue, dated 10th June 1907.)

FOREST No. 67.

The Board of Revenue submits proposals for the treatment of the occupied lands within forest reserves of the Javadis Hills in the North Arcot district and for the treatment of the trees standing thereon.

The Government agree with the Board that the land assigned on patta, together with such land as it may be desirable to set apart for the extension of cultivation and for the exercise of communal privileges, should be retained as enclosures within the reserves. Before the boundaries, are finally notified, these enclosures should be inspected by the Collector or Divisional Officer to ensure that sufficient land has been allowed for the extension of cultivation and for the exercise of communal privileges and by the District Forest Officer to verify the suitability and accuracy of the boundary determined.

The Government do not approve of the Conservator's suggestion that the enclosures, as finally settled, should be notified by the publication of errata to the original forest settlement notifications. They consider that the enclosures should be formally disafforested. The Board will accordingly be requested to submit, in due course, a statement showing the area originally admitted and that now allowed under the heads, occupied land, unoccupied waste and poramboke in respect of each reserve as well as the necessary disafforesting notification. The Board should also be submit a sketch showing the position of all enclosures in the reserves. As observed in paragraph 6 of the Board's reference, the issue of pattas already sanctioned by the Government need not be delayed.

The Board's recommendations that all trees except sandal may be made over to the cultivators without collection of tree value and that the ownership of sandal trees wherever situated should be reserved to Government are accepted. A condition should be entered in the pattas to the effect that the Pattadar has no right o any sandal trees growing on the land and if possible, an agreement should be taken from the pattadar binding him to look after the trees (vide paragraph 7 of the Board's Proceedings, Forest No. 14, dated 19th January 1907).

The Government approve of the Board's proposal to cancel ordinary as well as bilmukta pattas for trees located on land held on patta or yearly (sivayijama) tenure.

APPENDIX VI-B.

Copy of letter from the Conservator of Forests, Southern circle, to the Secretary to the Commissioner of Land Revenue and Forests, Madras, dated 20th February 1918, Roc. No. 1373/17 and of Board's Proceedings thereon Forest No, 134 Miscellaneous, dated 11th April 1918.

(Letter No. 1373/17, dated 20th February 1918. Reference Board's reference No. 2571/16–17, dated 13th December 1917).

I have the honour to state that in their order No. 2626, Revenue dated 28th August 1917, the Government while approving the proposal of the Board of Revenue in the Land Revenue Department to exclude the Yelagiri Hill villages from the operation of the waste land rules and to introduce the ordinary darkhast rules and the stead, laid down that future assignments of waste land in their villages should be strictly confined to the Malayalis.

In reporting on this matter, the Board have, in Paragraph 4 of its reference No, 2571 of 1916—6, dated 13th December 1917, stated that the department can lay no claim to sandalwood on patta lands· Such trees, if sold to merchants, will be a constant source of danger for these hills are so close to the railway that under cover of each purchase it will be easy for smugglers to carry wood from the Government forest under cover of such purchases.

This can only be avoided if all trees on the lands are purchased on behalf of Government as is done in other districts. But in order that this may be effective, it is absolutely necessary that in all future grants, sandal trees should be reserved to Governmens. It is on account of this provision which was made for the Polur Javadis in 1907 (vide Board's Proceeding Forest No. 119, dated 20th June 1907), that we have on this side of Javadis no trouble concerning the owner ship of Sandal and that we have been able to introduce such a successful village system. If the ordinary darkhast rules and payment for trees is instead on we shall have the same difficulties which occurred in the North Coimbatore and the Tirupathur Javadis and elsewhere. A high valuation will be placed on sandal and thd Malayalee will not pay it. He will therefore retain the land on sivayijama and either get rid of the tree or after a few years will take up new land and thus introduce the system of ponakad under the name of sivayijama cultivation.

This is my opinion only to be avoided if the trees are reserved for Government. Trees can then be allowed to grow in the hedge rows and rocky parts of the cultivation and both the Malayalis and the Department will benefit as the trees will be removed by the department as the mature and Malayalis will obtain a bonus for conserving them.

I, therefore, request that a clause may be added to the Board's amendment reserving all sandal in future for Government on precisely the same lines as was done for the Polur Javadis in Board's Proceedings, Forest No. 119, dated 20th June 1907.

PROCEEDINGS OF THE BOARD OF REVENUE (LAND REVENUE).

(*Forest No.* 134, *Miscellaneous. dated 11th April* 1918.)

THE HON. Mr. A. BUTTENROWRTH, C. S. I. I, C, S.,

Commissioner of Land Revenue.

THE HON. Mr. M. E. COUCHMAN, I. C. S.,

Commissioner of Land Revenue and Forest.

READ—the following:—

B.P.L.R. No. 96, Misc. dated 21st January 1918.
Letter from the Conservator of Forests, Southern circle, dated 20th February 1918, No. 1373/17.

Resolution.—The Board of Revenue agrees with the Conservator that in respect of future assignments under the darkhast rules, the rights of Government over sandal trees in the Yelagiri Hills should be adequately protected. In order to securethis object a condition should be inserted in the pattas under B.S.O. No. 18, reserving the sandal trees to Government in the same manner as has been laid down in G.O. No. 1462., Revenue dated 10th June 1907 (B.P.) Forest No. 119, Press, dated 20th June 1907, in respect of Darkhast grants in Javadi hill villages.

The Board does not consider that any amendment to theBoard's Standing Order is called as suggested by the Conservator in Paragraph 5 of his letter.

APPENDIX VI. C.

(*G.O. No.* 1497, *Revenue, dated 20th May* 1911.)
Forest No. 100.

The notification disafforesting a portion of theTenmalai reserved forest in the Thiruvannamalai taluk will be published in the Fort St. George Gazette and North Arcot District gazette.

The Government accept the Board's recommendation in Paragraph 3 of its proceeding read above that all trees except sandal on patta lands should be made over to the Malayalis, without collection of tree-value, but that the ownership of sandalwood trees, wherever they may be found, should be reserved to Government. The Government observe from the Collector's letter R. Dis. No. 25, Forest, dated 10th October 1909, thatthe Collector proposes to issue patta for all lands now actually cultivated be the Malayalis.

APPENDIX VII-A.

Declaration of certain lands as reserved lands.

Under thep provisions of rule 5 of the general rules for the management of reserved and unreserved lands made under section 26 of the Tamil Nadu Forest Act, 1882 (Tamil Nadu Act V of 1882), teh area, the boundaries of which are described in the schedule below are hereby declared to be reserved lands from the date of publication of this order.

SCHEDULE.—

1. District—North Arcot.
2. Taluk—Chengam.
3. Village—Pelamarathu extension.
4. Name of the Forest Block—Pelamarathur Extension Block.
5. Area of the Forest Block—5,530 acres or 2,238.0 hectares.

Boundaries.

North.—Starting from a point where the Pelamarathur reserve line meets the taluk boundary and then along the taluk boundary till it meets the Nallapatty reserve line.

East.—Thence along the said Nallapattu R.F. boundary.

South.—Thence along the Thenmaku R.F. boundary.

West.—Thence along the Thenmaku and Pelamarathur R.F. boundaries to the starting point.

(Signed) M. PARAMASIVAM,
Collector and District Magistrate.
North Arcot district.

Vellore,
30th June 1976.

[Published in *North Arcot District Gazette,* dated 5th August 1976 at page No. 51.]

APPENDIX VII-B.

Declaration of certain lands as Reserved Lands.

Under the provisions of rule 5 of the General Rules for the management of reserved and unreserved lands made under section 26 of the Tamil Nadu Forest Act, 1882 (Tamil Nadu Act V of 1882) the area, the boundaries of which are described in the schedule below are hereby declared to be reserved lands from the date of publication of this order.

SCHEDULE.

1. District—North Arcot.
2. Taluk—Tirupathur,
3. Village—Sakkarakuppam, Mandalavadi and Ponneri.
4. Name of the Forest Block—Ponneri.
5. Area of Forest Block—1,303.60 acres or 527.56 ha.

Boundaries.

North.—Starting from a point where Mandalavadi village boundary meets Vaniyambadi taluk boundary and along the taluk boundary.

East.—Thence along the reserve boundaries of Jolarpet and Nagaluthu Extension Reserved Forests.

South.—Thence along the village boundary of Sakkarakuppam.

West.—Thence along the village boundaries of Sakkarakuppam, Ponneri and Mandalavadi villages to the starting point.

(Signed) M. PARAMASIVAM,
Collector and District Magistrate,
North Arcot district.

Vellore.
30th June 1976.

[Published in *North Arcot District Gazette,* dated 5th August 1976 at page 51.]

APPENDIX VII-C.

Copy of the Gazette Notification.
North Arcot District Gazette.
Vellore, September 5, 1976.
Page No. 60.

Under the provisions of the rule 5 of the General Rules for the Management of Reserve and Unreserved lands made under section 26 of the Tamil Nadu Forest Act, 1882 (Tamil Nadu Act V of 1882) the area, the boundaries of which are described in the schedule below are hereby declared to be reserved lands from th date of publication of this order.

SCHEDULE.

Tirupathur taluk, Pungampatti Nadu village.
Name of the Forest Block—Kambugudi.

Area of the Forest Block—9,709 acres or 3,929.23 ha.

Boundaries.

North.—Starting from a point where the Pungampattu village boundary meets the common boundary of Mambakkam Reserved Forest and Andiappanur Reserved Forest and along the Andiappanur Reserved Forest boundary till it meets Pungulam Reserved Forest and along the Pungulam Reserved Forest till it meets Inner Javadi Reserved Forest boundary.

East and south.—Thence along the Inner Javadi Reserved Forest boundary till it meets the reserve boundary of Mambakkam Reserved Forest.

West.—Thence along the Mambakkam Reserved Forest boundary to the starting point.

APPENDIX VIII.

Statement showing the Forest Offenecs—Sandalwood cases only detected by Titupathur Divisional Staff and Mobile Party Staff. Tirupathur, since 1961–62.

		Detaills of Sandalwood cases.						
Years.	*Number of sandal cases.*	*Nature of the cases.*			*Legal position of the cases.*			*Remarks.*
		Minor.	*Medium or UDC.*	*Major.*	*Compounded.*	*Convicted.*	*Acquitted.*	
(1)	(2)	(3	(4)	(5)	(6)	(7)	(8)	(9)
Deducted by the Divisional Staff—								
1961–62	2	1	..	1	..	1	1	....
1962–63	18	14	4	..	1	12	5	....
1963–64	5	4	1	..	2	3	..	....
1964–65	12	10	2	..	3	8	1	....
1965–66	6	5	1	..	4	2	..	....
1966–67	2	2	..	..	..	..	2	....
1967–68	7	6	1	..	2	4	1	....
1968–69	11	6	5	..	0	10	..	1 case handed over to the Tahsildar.
1969–70	10	4	5	1	1	7	2	....
1970–71	14	7	6	1	6	8	..	....
1971–72	34	20	11	3	6	27	..	1 U.D.C.
1972–73	41	14	17	10	6	28	5	2 Pending with CID.
1973–74	39	10	26	3	14	20	3	2 U.D.C.
1974–75	57	30	23	4	33	15	1	8 Pending.
1975–76	52	21	30	1	41	6	..	2 U.D.C. 3 Pending.
Total ..	310	154	132	24	119	151	21	
Deducted by the Mobile Party—								
Upto 1972–73	..	..	..	..	..	..	..	....
1973–74	4	..	3	1	4	..	..	....
1974–75	..	..	..	..	..	..	..	....
1975–76	25	6	17	2	18	6	..	1 case pending.
	29	6	20	3	22	6	..	
GRAND TOTAL ..	339	160	152	27	141	157	21	

Minor cases : Offences by a single, person cutting or removal only in head load and inside R.F.

Medium : Offences by more than one person cutting or removal only in headload and inside or outside R.F.

Major : Stocking or removal with the use of vehicle inside R.F.s. by one person or more for smuggling.

APPENDIX No. IX.

STATEMENT SHOWING THE NUMBER OF COW UNITS THAT GRAZED UNDER PERMITS AND GRAZING REVENUE REALISED IN EACH RANGE AND YEAR SINCE 1961-62.

Year.	Tiruvannamalai range.		Sathanur range.		Chengam range.		Tirupathur range.		Alangayam range.		Total.	
	Cow units.	Revenue.	Cow units.	Revenue.	Cow units.	Revenue.	Cow units.	Revenue.	Cow units.	Revenue.	Cow units.	Revenue.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
		RS. P.		RS. P.		RS. P.		RS. P.		RS. P.		RS. P.
1961–62	23,610	5,779·25	43,892	12,047·96	15,649	3,912·30	17,296	4,324·00	16,050	4,012·62	1,16,497	30,076·13
1962–63	25,897	6,309·13	39,261	12,420·71	16,228	4,057·10	19,579	4,894·75	16,864	4,216·00	1,17,829	31,897·69
1963–64	28,549	6,986·10	54,840	12,183·80	14,355	3,588·79	19,492	4,872·88	16,486	4,121·50	1,33,722	31,753·07
1964–65	23,735	11,867·25	29,534	14,767·25	25,623	12,811·25	17,242	8,621·00	14,948	7,473·75	1,11,082	55,540·50
1965–66	22,201	11,100·50	36,914	18,456·75	17,493	8,746·50	15,785	7,892·50	16,838	8,419·00	1,09,231	54,615·25
1966–67	20,394	10,197·25	35,174	17,587·00	21,208	10,604·00	16,082	8,041·00	16,838	8,419·00	1,09,696	54,848·25
1967–68	20,580	10,290·00	33,756	16,878·25	22,700	11,350·00	15,853	7,926·50	16,017	8,008·50	1,08,906	54,453·25
1968–69	20,913	10,456·25	30,639	15,319·50	21,228	10,614·25	15,178	7,589·00	15,084	7,542·00	1,03,042	51,521·00
1969–70	21,549	10,774·75	38,348	19,174·00	19,165	9,582·50	12,186	6,093·00	14,204	7,102·00	1,05,452	52,726·25
1970–71	22,244	11,122·00	40,366	20,182·75	20,032	10,016·25	12,406	6,203·00	13,564	6,782·00	1,08,612	54,306·00
1971–72	18,839	18,839·00	34,594	34,594·00	16,900	16,899·50	10,261	10,261·00	12,693	12,693·00	93,287	93,286·50
1972–73	18,242	18,242·00	34,667	34,667·00	14,746	14,746·50	8,659	8,659·00	12,747	12,747·00	89,061	89,061·50
1973–74	18,015	18,015·00	34,000	34,000·00	14,981	14,981·00	9,950	9,950·00	10,740	10,740·00	87,686	87,686·00
1974–75	18,638	18,638·00	30,565	30,565·00	12,773	12,772·50	9,236	9,236·00	8,311	8,311·00	79,523	79,522·50
1975–76	19,066	19,066·00	31,421	31,421·50	11,753	11,753·50	11,628	11,628·50	10,503	10,503·00	84,371	84,372·50
Total ..	3,22,472	1,87,682·48	5,47,971	3,24,265·47	2,64,834	1,56,435·94	2,10,833	1,16,192·13	2,11,887	1,21,090·37	15,57,997	9,05,666·39

APPENDIX X–A

STATEMENT SHOWING THE NUMBER OF CASES AND REVENUE REALISED FROM GOAT BROWSING OFFENCES SINCE 1961-62 DETECTED BY THE DIVISIONAL STAFF ONLY.

Year.	*Tiruvannamalai range.*		*Sathanur range.*		*Chengam range.*		*Tirupathur range.*		*Alangayam range.*		*Total.*	
	Number of cases.	*Revenue.*	*Number of cases.*	*Revenue.*	*Number of cases.*	*Revenue.*	*Number of cases.*	*Revenue.*	*Number of cases.*	*Revenue.*	*Number of cases.*	*Revenue.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
		RS.		RS.		RS.		RS.		RS.		RS.
Divisional staff only—												
1961–62	12	956·00	3	215·00	6	620·00	4	440·00	6	580·00	31	2,811·00
1962–63	6	700·00	11	810·00	5	132·00	2	155·00	3	588·00	27	2,385·00
1963–64	4	470·00	8	835·00	1	..	..	..	3	244·00	16	1,549·00
1964–65	14	1,484·00	13	2,766·00	6	310·00	..	..	9	812·00	42	5,372·00
1965–66	3	290·00	10	1,235·00	3	269·00	..	..	22	2,040·00	38	3,834·00
1966–67	8	1,690·00	53	11,214·00	6	680·00	..	..	38	6,450·00	105	20,034·00
1967–68	24	2,408·00	32	4,876·00	9	1,110·00	..	..	11	1,788·00	76	10,182·00
1968–69	13	1,360·00	14	1,817·50	3	612·00	..	..	20	4,385·00	50	8,174·50
1969–70	14	1,980·00	29	3,272·00	10	1,872·00	..	..	6	1,000·00	59	8,124·00
1970–71	9	399·00	25	2,053·00	12	680·00	2	480·00	..	..	48	3,612·00
1971–72	10	645·00	26	2,637·50	4	1,160·00	..	..	2	1,970·00	42	6,412·50
1972–73	7	225·00	27	3,150·50	18	4,902·00	8	460·00	5	1,970·00	65	10,707·50
1973–74	..	..	9	1,710·00	9	1,410·00	5	4,380·00	8	490·00	31	7,990·00
1974–75	9	470·00	5	250·00	3	770·00	3	190·00	14	1,534·00	34	3,214·00
1975–76	4	350·00	3	..	24	540·00	4	465·00	10	900·00	45	2,255·00
Total ..	137	13,427·00	268	36,841·50	119	15,067·00	28	6,570·00	157	24,751·00	709	96,656·50

APPENDIX X-B.

STATEMENT SHOWING THE NUMBER OF CASES AND REVENUE REALISED FROM GOAT BROWSING OFFENCES SINCE 1961–62—DETECTED BY THE MOBILE PARTY STAFF.

Year.	*Tiruvannamalai range.*		*Sathanur Range.*		*Chengam Range.*		*Tirupathur Range.*		*Alangayam Range.*		*Total.*	
	Number of cases.	*Revenue.*	*Number of cases.*	*Revenue.*	*Number of cases.*	*Revenue.*	*Number of cases.*	*Revenue.*	*Number of cases.*	*Revenue.*	*Number of cases.*	*Revenue.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Mobile Party staff only—												
1961–62	..	..	1	505·00	..	..	..	..	..	..	1	505·00
1962–63	..	..	1	1,484·00	..	..	..	..	..	..	1	1,484·00
1963–64	..	..	2	402·00	1	90·00	..	..	6	2,407·00	9	2,899·00
1964–65	3	200·00	5	1,764·00	..	..	..	..	7	3,601·00	15	5,565·00
1965–66	..	..	3	1,171·00	..	..	..	..	2	766·00	5	1,937·00
1966–67	..	..	3	750·00	2	364·00	2	372·00	3	503·00	10	1,989·00
1967–68	..	..	4	2,288·00	1	185·00	..	..	..	..	5	2,473·00
1968–69	6	1,502·00	4	435·00	..	..	..	..	..	..	10	1,937·00
1969–70	11	968·00	4	345·00	2	450·00	1	60·00	1	310·00	19	1,823·00
1970–71	..	..	..	..	..	..	..	..	..	..	..	..
1971–72	2	400·00	1	15·00	..	..	..	..	2	1,060·00	5	1,475·00
1972–73	11	2,794·00	8	1,486·00	12	2,780·00	2	312·00	14	4,383·00	47	11,755·00
1973–74	13	3,636·00	3	740·00	2	39·00	2	495·00	8	2,292·00	28	7,202·00
1974–75	9	3,026·00	6	2,085·00	7	2,616·00	4	786·00	15	4,546·00	41	13,059·00
1975–76	19	7,540·00	54	16,960·00	9	4,420·00	6	1,785·00	17	5,795·00	105	36,500·00
Total ..	74	20,066·00	99	30,430·00	36	10,944·00	17	3,810·00	75	25,663·00	301	90,913·00
Grand Total ..	211	33,493·00	367	67,271·50	155	26,011·00	45	10,380·00	232	50,414·00	1,010	1,87,569·50

APPENDIX XI.

STATEMENT SHOWING THE NUMBER OF FIRES REPORTED, THE AREA BURNT AND THE DAMAGED VALUE IN EACH RANGE SINCE 1961.

Year.	*Tiruvannamalai Range.*			*Sathanur Range.*			*Chengam Range.*		
	Number of fires.	*Area in Hecs. burnt.*	*Value damaged.*	*Number of fires.*	*Are in ha. burnt.*	*Value damaged.*	*Number of fires.*	*Area in Ha. burnt.*	*Value damaged.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1961	6	56·65	10·00	13	145·28	517·00	15	228·64	58·50
1962	6	5·66	..	4	46·54	..	13	140·20	123·00
1963	15	89·83	..	4	17·20	6·75	6	113·49	28·00
1964	8	40·80	..	6	74·87	19·50	10	102·36	23·75
1965	4	52·60	..	8	74·06	20·00	3	36·42	9·00
1966	7	87·80	..	4	23·07	17·00	11	77·98	19·25
1967	12	66·75	..	9	29·14	8·00	6	37·25	48·00
1968	5	64·74	..	4	11·74	29·00	5	73·23	335·00
1969	8	198·16	110·00	8	64·67	..	2	30·35	120·00
1970	1	110·16	25·00	2	12·14	..	15	189·38	63·00
1971	1	80·93	..	2	10·12	..	6	105·21	130·00
1972	2	202·74	..	5	21·04	..	..	..	..
1973	..	..	..	5	15·58	..	2	4·00	..
1974	4	24·68	..	10	98·14	..	3	44·51	..
1975	..	..	..	2	10·80	..	1	0·10	..
Total	79	1,081·50	145·00	86	654·39	617·25	98	1,183·12	957·50

Year.	*Tirupathur Range.*			*Alangayam Range.*			*Total (Division).*		
	Number of fires.	*Area in Ha. burnt.*	*Value damaged.*	*Number of fires.*	*Area in Ha. burnt.*	*Value damaged*	*Number of fires.*	*Area in Ha. burnt.*	*Value damaged.*
(1)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
1961	28	548·74	90·62	6	27·32	23·70	68	1,006·63	699·82
1962	20	392·55	59·72	11	63·94	..	54	648·89	182·72
1963	16	373·99	46·63	15	78·53	47·35	56	673·04	128·73
1964	18	382·13	127·00	18	89·64	265·10	60	689·80	435·35
1965	3	18·21	35·00	9	114·53	48·00	27	295·82	112·00
1966	11	193·44	37·50	14	77·40	36·00	47	459·69	109·75
1967	9	61·31	105·00	10	88·83	254·97	46	283·28	415·97
1968	5	37·64	80·00	9	48·46	32·00	28	235·81	476·00
1969	8	53·82	156·00	10	35·11	23·00	36	382·11	409·00
1970	2	3·64	18·00	1	0·40	1·00	21	315·72	107·00
1971	4	15·78	11·00	4	16·99	23·00	17	229·03	164·00
1972	3	29·54	..	2	10·42	..	12	263·74	..
1973	6	129·50	50·00	4	12·54	585·00	17	161·62	635.00
1974	11	247·05	..	11	116·66	250·00	39	531·04	250·00
1975	3	32·00	....	2	6·47	..	8	49·37	..
Total ..	147	2,519·34	816·47	126	787·24	1,589·12	536	6,225·59	4,125·34

APPENDIX XII.

STATEMENT SHOWING THE FOREST OFFENCES DETECTED IN TIRUPATHUR DIVISION AND SPECIAL MOBILE PATROL PARTY, VELLORE AND TIRUPATHUR SINCE 1961-62 (Except Goat Browsing)

Year and Name of the Division. (1)	*Cases under Forest fire.* (2)	*Unauthorised felling and removal of forest produce except sandal wood.* (3)	*Illicit grazing.* (4)	*Miscellaneous offences like illicit hunting timber transit rules etc.* (5)	*Sandal wood cases only.* (6)	*Total No. of offences.* (7)	*Compounding fees realised.* (8)
Forest Division, Tirupathur.—							
1961-62	47	2,950	111	30	2	3,140	49,555·90
1962-63	6	2,650	172	33	18	2,879	49,181·30
1963-64	38	2,769	195	32	5	3,039	48,346·69
1964-65	4	2,676	200	13	12	2,905	51,213·00
1965-66	3	2,815	248	43	6	3,115	57,215·50
1966-67	..	2,758	342	20	2	3,122	65,404·00
1967-68	1	2,320	226	27	7	2,581	49,416·75
1968-69	5	1,971	168	24	11	2,179	36,605·50
1969-70	4	2,390	168	26	10	2,598	48,981·00
1970-71	1	2,509	126	14	14	2,664	43,147·00
1971-72	5	2,497	146	34	34	2,716	50,546·50
1972-73	2	2,538	141	24	41	2,746	72,804·50
1973-74	3	2,295	81	32	39	2,450	81,395·00
1974-75	2	2,182	25	29	57	2,295	74,269·00
1975-76	..	2,107	120	7	53	2,287	63,101·00
Total	121	37,427	2,469	388	311	40,716	8,41,182·64
Special Mobile Patrol Party—Vellore and Tirupathur.—							
1961-62	..	16	2	..	..	18	1,805·00
1962-63	..	5	1	..	..	6	1,769·00
1963-64	..	27	11	..	..	38	5,694·00
1964-65	..	35	16	..	..	51	9,051·00
1965-66	..	26	8	..	..	34	4,849·00
1966-67	..	20	22	..	..	42	5,102·00
1967-68	..	16	13	..	..	29	6,295·00
1968-69	..	27	4	..	..	31	6,322·00
1969-70	..	19	10	..	..	29	3,276·00
1970-71	..	5	..	..	..	5	1,790·00
1971-72	..	26	4	..	..	30	4,950·00
1972-73	..	19	39	..	..	58	12,685·00
1973-74	..	23	24	..	4	51	16,531·00
1974-75	..	17	43	..	..	60	15,008·00
1975-76	..	69	43	..	24	136	42,428·50
Total	..	350	240	..	28	618	1,37,556·00
Grand Total for the Division	121	37,777	2,709	388	339	41,334	9,78,738·64

APPENDIX XIII.

A resume spike disease of Sandal.

Occurrence.—The spike disease of Sandal is known only from South India and has not been reported on Sandal that occurs naturally in Java or on any other species of Santalum occuring naturally in Malaysie and Australia. The first record of occurrence of spike disease of sandal was made by Mc. Carthy (1899) from Coorg among though it is likely that the disease was in existence earlier. The disease has been spreading far and wide taking a heavy toll of the species and leaving a trial of desolation behind.

Symptoms.—The most characteristic symptom of the spike disease is the severe reduction in the size of the leaves both along length and breadth and shortening of the internodes so that the leaves become closely crowded together. At the same time leaves show a tendency to stand out stiffly from the branch giving a rosette appearance to the affected branches. The leaves stand out like spikes from which the disease is named. In some cases, the infected shoots may show continuous apical growth and assume a drooping habit giving a pendulous appearance to the spike. As the disease progresses, the leaves become Yellowish and may acquire a reddish tinge later. The symptoms which initially are present only on a few branches, gradually spread to the whole tree. With the progress of the disease, the leaves become smaller and smaller and get reduced to a mere 0.8 to 0.15 cm. along length and breadth respectively as against the normal leaf size of about 7.5 cm. by 2.5 cm. The flowers of infected trees often exhibit phyllody The infected trees, the haustaoria and root tips die. The diseased parts rarely fruit or flower. The affected trees usually die in one or two years.

In some trees the disease may be masked. However if such trees are pollarded, the symptoms manifest in the new flush that develops.

In diseased sandal there is a pronounced accumulation of starch in branches and leaves. Increased starch content is considered to be due to lower diastatic activity in spiked leaves as compared to that in healthy ones. (Coleman 1917) The same author further showed that spiked plants contain lower amounts of calcium and total ash content and higher nitrogen content in contrast to healthy plants. The ratio of Ca/N can be used as a diagnostic feature for determining whether or not the plant is infected. Calcium deficiency in the Vegetative parts is traced to no-mobility of the same from the roots where it is stored. In spike disease where plants remain in the vegetative stage only, the nitrate reductase activity is higher than in healthy plants, thus indicating the high rate of nitrogen utilisation which is possible due to rapid synthesis of viral protein in spiked leaves. Spiked plants show lower iron contents resulting in cholorosis of the leaves.

Cause.—Different views were held earlier as to the cause of the disease. It was believed to be due to intensified carbon assimilation (Butler 1903), death of haustaoria and root tipe resulting in cutting-off of supplies of salts and water to the plants which dies of exhaustion (Barber 1903), attack by virus (Hodgson 1918) which was demonstrated to be transmissable by grafting and which, in some cases, may be spread by insects (Coleman 1917, 1923) though virus was never detected on diseased plants but for which positive serological diagonastic tests were obtained (Nayar and Padmanabha, 1967), an unbalanced circulation of sap which may be caused by a number of different factors (Hole 1917), attack by a bacterial agency which is an Uttra-Microscopic organism (Fisher 1918), defective lime supply to affected parts barring the infective nature of the disease (Jyengar 1960).

Sandal spike belongs to the 'yellow group' of plant diseases with which there is resumblance in symptoms such as reduction of leaf size, development of witches-looms and Phyllody and in the transmission of the disease by leaf hoppers. Recent researches show that many of the yellows group' of diseases which were earlier considered to be due to viruses are now attributed to microplasma-like bodies. There is no evidence of cell-wall in these bodies, which are bounded by smooth unit membranes. The structures are spherical to avoid and vary in size from 40-750 mm.

Disease transmission.—The disease can be transmitted by grafting. Besides twig grafting, disease transmission is also possible by bud grafting or by means of special leaf insertions method in which, part of fresh diseased leaves are inserted between the wood and bark of healthy plants. The disease is not transmitted through seed or soil. Transmission by mechanical sap inoculation generally yielded negative results.

The disease appears to be spread by weak-flying insect-vectors that may be carried to long distances by strong wind. Leaf hoppers namely Moonia albimaculata and Jassus indicus are believed to be vectors of spike disease (Rangasamy and Griffith 1940) though insect transmission is not invariably successful under controlled conditions.

Disease resistance.—Two types of resistence to spike disease are if reported to exist in sandal (1) Autogenic resistance exhibited by certain plants which is largely independent of the nature of associated host plants and (2) Acquired resistance built up by sandal, if it parasitises certain species of hosts and certain environmental conditions are provided.

Control.—No effective control of spike disease has so far been evolved, though attempts were made on the following lines.

(1) Elimination of the source of infection by removing or killing the spiked sandal trees generally by ansenical poisons and also by removing diseased branches. Mr. Colaman recorded that between 1903 and 1910 around Jowlagiri in Hosur Division 3,49,312 spiked plants were removed. Such measure were taken in other Divisions of the State and this has not brought about any effect on the spread of the disease.

Selection of sandal host.—Certain host plants are believed to impart resistance of susceptibility to spike disease on sandal. Some of the host plants which are supposed to impart relative resistence to spike for sandal are Cassia siamea, Dalbergia, Sissoo, Erythroxylon, Monogynum, strychnos nuxvomica, zizyphus mauritiana, casuarina equisetifolia, Azadirachta indica, Ficus bengalensis, Bambusa arundinacca. Ruts graveolens, Dodonaca viscos, etc. Among the host plants which render sandal susceptible to spike are species of Acacia, Caesalpinia, Coriaria, Cajanus, caian, Lantana camala Pongamla pinnats, Ocimum sanctium, etc.

Chemical control.—Chemical control of the disease may be directed on diseased sandal trees or towards insect vectors transmitting the disease. Mycoplasma disease on plants are known to be amenable to treatment with antibiotics, for example tetracycline which can cause only temporary remission in disease symptoms on sandal.

Genetic resistance.—Apparently spike resistant trees of sandal are found to exist in heavily spiked area and testing them for resistance to spike disease through grafting, etc. and vegetatively propagating them or by evolving spike resistant hybrid by crossing Santalum album with other species of Santalum may have to be persued.

APPENDIX XIV.

STATEMENT SHOWING THE YIELD AND REVENUE OBTAINED FROM SALE OF GREEN MANURE LEAF FROM 1961—62 TO 1975—76

TIRUPATHUR DIVISION

Year.	Thiruvannamalai Range		Sathanur Range		Chengam Range		Tirupathur Range		Alangayam Range		Total	
	Yield in tonnes.	Revenue Rs. P.	Yield in tonnes.	Revenue Rs. P.	Yield in tonnes.	Revenue Rs. P.	Yield in tonnes.	Revenue Rs. P.	Yield in tonnes.	Revenue Rs. P.	Yield in tonnes.	Revenue Rs. P.
(1)	(2)	(3)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(12)	(13)
1961-62	..	..	102-750	579-75	31-500	127-00	..	..	—	..	134-250	706-75
1962-63	..	..	117-250	519-00	3-250	13-00	3-500	7-00	61-000	122-00	185-000	661-00
1963-64	..	..	118-250	473-00	12-500	66-00	3-500	14-00	50-000	100-00	184-250	653-00
1964-65	..	..	52-250	418-00	0-130	1·00	..	..	52-500	210-00	104-880	629-00
1965-66	..	..	355-500	2844-00	9-500	76-00	21-000	84-00	30-000	120-00	416-000	3124-00
1966-67	..	..	92-250	738-00	12-250	98-00	30-500	122-00	217-000	868-00	352-000	1826-00
1967-68	..	..	76-750	614-00	72-750	582-00	6-500	26-00	38-000	152-00	194-000	1374-00
1968-69	..	..	41-000	328.00	37-750	282.00	..	..	3-500	14·00	82-250	624.00
1969-70	..	..	98-000	784.00	163-250	1,306.00	9-500	38.00	..	..	270-750	2,128.00
1970-71	24-000	94.00	190-250	1,522.00	50-000	400.00	..	..	..	..	264-250	2,016·00
1971-72	1-500	6.00	181-750	1,454.00	0-130	10.00	31-500	126·00	..	..	214-880	1,596·00
1972-73	0-100	1.00	5-250	63.00	45-000	542.00	..	..	..	..	50-350	606.00
1973-74	..	..	..	..	20-750	249.00	..	..	..	..	20-750	249.00
1974-75	..	..	..	..	44-000	528.00	..	..	..	..	44-000	528.00
1975-76	..	..	..	..	..	..	..	..	3-500	14.00	3-500	14·00
Grand Total..	25-600	101·00	1,431-250	10336.75	502-760	4,280.00	106-000	417·00	455-500	1,600.00	2,521-110	16,734.75

APPENDIX XV.

ABSTRACT SHOWING THE YIELD AND REVENUE BY THE SALE OF GRASS IN TIRUPATHUR DIVISION.

year	*Tiruvannamalai*		*Sathanur*		*Chengam*		*Tirupathur.*		*Alangayam*		*Total.*	
	Yield in tonnes. (2)	*Revenue Rs. P.* (3)	*Yield in Tonnes.* (4)	*Revenue Rs. P.* (5)	*Yield in tonnes.* (6)	*Revenue Rs. P.* (7)	*Yield in tonnes.* (8)	*Revenue Rs. P.* (9)	*Yield in tonnes.* (10)	*Revenue Rs. P.* (11)	*Yield in tonnes.* (12)	*Revenue Rs. P.* (13)
(1)												
1961–62	..	..	..	..	..	..	..	..	..	..	..	..
1962–63	..	..	..	..	..	..	12·020	29 05	32·400	77 50	44·420	106 55
1963–64	..	..	..	..	..	..	18·480	41 95	47·100	99 00	65·580	140 95
1964–65	..	..	..	..	..	..	15·500	31 00	64·960	143 15	80·460	174 15
1965–66	..	..	..	..	..	..	51·120	106 80	32·200	74 25	83·320	181 05
1966–67	13·150	26 10	..	..	3·000	6 00	25·700	52 75	64·180	142 95	106·030	227 80
1967–68	10·000	20 00	..	..	14·000	28 00	62·760	135 15	44·300	90 25	131·060	273 40
1968–69	17·675	36 85	..	..	42·500	85 00	4·000	8 00	32·480	70 70	96·655	200 55
1969–70	7·775	15 55	..	..	13·375	26 75	..	..	12·000	29 00	33·150	71 30
1970–71	19·725	64 45	27·150	54 30	15·125	30 25	6·540	16 20	21·500	54 00	90·040	219 20
1971–72	3·300	13 20	11·425	45 70	..	..	7·960	33 80	8·500	34 00	31·185	126 70
1972–73	3·425	16 70	20·000	80 00	3·000	12 00	..	..	13·500	54 00	39·925	162 70
1973–74	..	..	5·000	20 00	1·500	6 00	2·500	16 00	31·000	126 00	40·090	168 00
1974–75	12·500	49 50	..	..	12·500	46 00	1·000	4 00	8·000	32 00	34·000	131 50
1975–76	7·500	30 00	..	..	30·500	122 00	..	..	12·700	52 00	50·700	204 00
Total ..	95·050	272 35	63·575	200 00	135·500	362 00	207·580	474 70	424·820	1,078 80	926·525	2,387 85

APPENDIX XVI.

STATEMENT SHOWING THE PRICES OBTAINED FOR DIFFERENT CLASSES OF SANDALWOOD AT TIRUPATHUR DEPOT FROM 1961 TO 1976 IN RUPEES.

Serial number and Name of class.	Class number.	*Per tonne* 1961		*Per tonne* 1962		*Per tonne* 1963		*Per tonne* 1964		*Per tonne* 1965		*Per tonne* 1966	
		July. 1961.	*January* 1962.	*July*	*December*	*July*	*December*	*July*	*December*	*July*	*December*	*July*	*December*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1 Ghatbadla	V	9,498	10,141	10,244	6,536	7,352	7,211	8,256	8,669	8,946	8,975	9,358	11,689
2 Bagardad	VI	9,950	10,181	10,207	6,640	8,100	7,645	8,683	9,295	9,100	9,005	9,400	12,500
3 Roots Ist class	VII	10,215	9,313	9,247	6,600	6,951	6,694	6,962	7,357	6,666	6,626	8,227	11,317
4 Roots IInd class	VIII	11,070	9,683	9,533	6,901	7,313	7,002	7,899	8,056	6,777	6,959	9,415	12,939
5 Roots III class	IX	12,694	10,410	10,173	7,662	7,915	7,640	8,142	8,520	7,515	7,739	11,120	14,715
6 Jajpokal I class	X	10,881	8,469	7,984	5,993	6,178	5,536	6,137	6,603	5,965	5,791	8,176	11,611
7 Jajpokal II class	XI	10,667	8,115	7,945	5,999	6,242	5,521	6,386	6,792	5,830	5,809	8,512	11,711
8 Ainbagar	XII	10,605	7,739	7,690	6,008	6,158	5,561	6,380	6,835	5,848	5,889	8,672	11,695
9 Cheria	XIII	9,796	7,654	7,800	6,000	6,015	5,795	6,297	6,817	5,816	5,895	8,695	11,695
10 Ainchilta	XIV	10,846	7,597	7,800	6,028	5,252	5,750	6,603	7,068	6,205	6,422	8,938	11,815
11 Milvachilta	XVI	7,646	6,378	6,131	4,402	4,332	4,066	4,350	4,774	4,046	4,198	6,342	8,266
12 Basolabukni	XVII	7,232	5,650	5,994	3,987	3,631	3,488	4,191	4,642	3,572	3,670	5,771	7,769
13 Saw dust	XVIII	10,767	7,810	7,785	5,600	4,520	4,295	5,005	5,039	4,710	4,605	6,205	8,205
14 Charred wood (roots)		11,055	9,000	9,315	6,700	7,545	6,900	7,523	8,305	..	..	9,990	11,900
15 Charred billets		10,260	8,255	8,400	5,900	6,555	5,725	6,281	7,000	5,685	6,500	8,627	11,800
Net over all price all classes		10,027	8,175	7,936	5,737	5,905	5,514	6,183	6,744	5,746	5,778	7,976	11,013
16. Sapwood		Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	295	420	507

APPENDIX XVI—*cont.*

STATEMENT SHOWING THE PRICES OBTAINED FOR EACH CLASSES OF SANDALWOOD AT TIRUPATHUR DEPOT FROM 1961 TO 1976 DECEMBER—IN RUPEES.—*cont.*

Serial number and Name of class.	*Class No.*	*Per tonne* 1967 *July.* (15)	*Per tonne* 1967 *December.* (16)	*Per tonne* 1968 *July.* (17)	*Per tonne* 1968 *December.* (18)	*Per tonne* 1969 *July.* (19)	*Per tonne* 1969 *December.* (20)	*Per tonne* 1970 *July.* (21)	*Per tonne* 1970 *December.* (22)	*Per tonne* 1971 *July.* (23)	*Per tonne* 1971 *December.* (24)
1 Ghatbadla	V	12,217	12,794	12,986	13,239	12,514	12,455	12,697	13,229	12,850	12,911
2 Bagardad	VI	12,200	13,700	15,890	Nil.	13,710	12,737	12,786	13,015	12,960	12,520
3 Roots Ist class	VII	11,311	12,356	12,464	12,083	11,687	10,779	10,436	10,246	10,322	10,167
4 Roots II nd class	VIII	12,419	12,956	12,965	12,342	11,027	10,985	10,668	10,788	10,627	10,309
5 Roots III class	IX	13,993	14,479	14,193	13,616	12,714	11,803	11,644	11,664	11,485	11,039
6 Jajpokal I class	X	11,639	11,992	11,640	11,043	10,401	9,778	9,252	9,363	8,995	8,894
7 Jajpokal II class	XI	11,258	11,353	11,239	10,232	9,622	9,053	8,656	8,701	8,726	8,422
8 Ainbagar	XII	10,977	11,354	11,219	10,518	9,694	9,016	8,634	8,922	8,621	8,339
9 Cheria	XIII	11,000	11,310	11,295	10,730	9,757	9,260	8,747	8,868	8,700	8,397
10 Ainchilta	XIV	11,000	11,320	11,553	11,710	10,043	9,457	9,398	9,994	8,718	8,729
11 Milvachilta	XVI	6,986	7,237	7,066	6,252	5,623	5,470	5,346	5,374	5,435	5,193
12 Basolabukni	XVII	6,464	5,745	5,517	4,684	4,845	5,161	4,999	4,784	4,669	4,515
13 Saw dust	XVIII	8,015	8,000	7,995	7,810	7,310	7,500	7,691	8,110	7,510	6,010
14 Charred wood (roots)		12,020	12,610	12,500	12,000	11,710	11,010	10,888	11,120	10,630	10,440
15 Charred billets		11,026	11,420	11,532	10,714	10,010	9,323	8,989	9,503	9,654	9,494
Net over all price all classes		10,823	10,447	10,800	9,788	95,38	8,981	8,658	8,545	8,212	8,396
16 Sapwood		215	364	914	465	315	328	326	256	160	100

APPENDIX XVI—*cont.*

STATEMENT SHOWING THE PRICES OBTAINED FOR EACH CLASSES OF SANDALWOOD AT TIRUPATHUR DEPOT FROM 1961 TO 1976 DECEMBER—IN RUPEES—*cont.*

Serial number and Name of class.	*Class No.*	*Per tonne* 1972		*Per tonne* 1973		*Per tonne* 1974		*Per tonne* 1975		*Per tonne* 1976	
		July	*December*	*July*	*Dcember.*	*July*	*December*	*July*	*December*	*July*	*December*
		(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)
1 Ghatbadla	V	13,631	14,809	17,791	23,065	56,336	47,268	35,010	38,769	41,798	56,610
2 Bagardad	VI	12,503	14,028	15,400	21,688	53,750	47,890	..	34,000	37,807	49,100
3 Roots Ist class	VII	10,226	10,683	13,123	30,914	62,696	..	20,103	22,827	31,975	47,692
4 Roots II nd class	VIII	10,572	11,121	15,271	35,270	70,483	..	20,048	25,352	35,876	53,700
5 Roots III class	IX	11,500	12,380	17,473	35,257	76,681	..	21,291	26,605	37,710	58,556
6 Jajpokal I class	X	10,831	13,021	16,634	26,369	53,872	42,670	22,968	23,420	34,872	51,133
7 Jajpokal II class	XI	9,704	10,622	13,853	27,846	54,475	..	20,044	21,239	31,765	49,180
8 Ainbagur	XII	9,553	10,324	14,100	27,532	53,535	..	20,010	21,081	31,217	49,009
9 Cheria	XIII	9,010	10,436	13,873	25,126	51,765	..	20,233	21,033	30,338	47,930
10 Ainchilta	XIV	9,690	10,450	15.230	29,896	60,025	..	20,510	23,175	34,030	51,850
11 Milvachilta	XVI	5,710	5,266	8,328	17,735	35,755	..	11,029	12,800	19,535	31,332
12 Basolabukni	XVII	4,681	4,898	8,288	15,942	30,491	..	8514	12,492	17,548	28,710
13 Saw dust	XVIII	6,698	6,523	8,598	17,000	33,300	..	10,050	16,010	23,100	32,000
14 Charred wood (roots)		11,370	11,220	16,005	30,500	64,355	..	21,010	25,700	37,000	54,000
15 Charred billets		9,965	10,744	14,676	27,129	52,403	..	20,736	24,005	51,000	57,310
Net over all price all classes		8,751	9,940	14,310	25,429	51,463	46,520	18,767	21,640	30,245	47,220
16 **Sapwood**		98	104	117	117	583	177	..	837	1,953	1,730

APPENDIX XVII .A.

TIRUPATHUR DIVISION.

Detailed list of Sandal in each Patta and Government Lands (other than R.F.)

Name of Taluk : Tirupathur
Name of village : Nellipattu
Name of Range : Tirupathur

Survey numbers. (1)	*Total number of trees.* (2)	*Dead trees.* (3)	*A trees.* (4)
1	8	5	..
12	59	29	2
13	9	3	1
14	16	..	1
15	3	..	..
19	10	3	..
20	3	..	..
22	6	..	..
26	2	..	..
29	3	..	..
30	14	1	..
31	1	..	..
32-1	8	..	..
33	8	..	..
36	13	..	..
40	6	..	..
42	3	..	2
46	6	1	..
48	17	5	..
49	33	4	1
51	2	..	..
52	14	..	..
66	4	..	..
69	3	2	..
71	5	..	1
72	8	..	1
73	2	..	..
74	12	..	..
76	3	..	..
77	8	1	..
78	5	..	..
81	6	4	1
84-1		1	..
89	3	..	..
90	17	17	..
91	33	25	..
92	17	2	..
93	28	3	..
96	2	..	..
98	7	..	..
99	6	6	3
100	3	..	..
102	4	..	..
104	13	2	1
105	8	..	..
106	6	..	..
107	32	7	2
108	20	..	..
110	32	..	2
111-1	28	12	5
111-2	3	..	..
112	6	1	..
Total ..	574	134	23
Unreserves	101	13	3
Grand total	675	147	26

Name of Taluk : Tirupathur
Name of enclosure : Nellivasal
Name of Range : Tirupathur

Survey numbers. (1)	*Total number of trees.* (2)	*Dead trees.* (3)	*A trees.* (4)
15	7	4	..
16	4	4	..
19	2	..	..
20	10	..	2
21	3	..	..
23	10	..	..
44	11	11	..
45	8	6	1
46	25	..	1
49	3	..	..
53	12	1	..
58	3	..	1
60	5	3	..
66	2	..	..
67	1	..	..
68	51	2	3
69	6	4	..
71	16	..	..
72	1	..	..
73	7	..	..
74	2	..	..
75	10	2	..
76	14	..	2
78	13	..	1
84	14	..	1
85	20	1	1
89	1	..	..
92	11	..	..
99	20	1	1
104	39	..	1
105	11	4	1
107	25	20	2
108	40	28	2
114	19	2	1
116	2	..	..
117	4	..	..
118	33	3	2
119	8	..	..
120	18	..	..
121	25	1	2
122	54	..	..
123	6	..	..
126	20	1	..
127	17	..	..
129	19	8	3
135	23	..	3
143	5	2	..
144	3	..	..
149	1	..	..
151	1	..	..
153	4	..	..
154	3	1	..
160	1	..	..
161 .	1	..	..
164	1	1	..
166	13	1	..
169 . .	19	..	..
170	10	1	1
172	25	..	1
173	13	4	..
Total ..	756	116	33
Government poramboke ..	966	140	43
Grand total	1,722	256	76

TIRUPATHUR DIVISION—*cont.*

Survey numbers. (1)	*Total number of trees.* (2)	*Dead trees.* (3)	*A trees.* (4)
3. *Pullyur.*			
1	15	6	..
2	5	..	..
4	8	6	1
6	53	11	2
7	13	..	..
8	136	79	6
10	1	..	..
14	2	..	..
18	14	10	..
19	9	4	2
19-1A	29	..	..
19-2	4	1	..
20	15	13	1
27	1	..	1
28	10		
29	4	1	
37	6	1	
38	40	5	1
39	27	..	2
40	4	..	..
43	1	..	..
45	4	3	..
47	5	2	..
48	31	26	3
49	11	7	1
50	38	11	3
51	22	..	..
52	14	..	3
53	40	2	8
54	12		
55	2	..	..
56	27	2	..
57-1	16	4	..
58	80	30	1
59	8		..
59-1	17	..	..
60	11	..	..
60-1	22	..	..
61	53	8	6
63	24	..	..
64	20	..	..
67	23	1	4
72	43	5	3
73	2	..	..
75	8	1	..
77	9	..	..
78	12	2	..
79	28	..	..
80	1	..	..
81	54	3	6
82	21	..	2
83	9	..	2
86	5	..	..
87	3	..	..
89	2	..	..
90	80	..	5
91	36	2	1
92	39	19	3
94	32	..	1
95	33	6	2
97	11	8	..
98	9	1	..
99	17	..	..
	26	..	..
100	32	1	..
101	28	..	..
102	41	..	1
103	46	4	1
104	25	2	2
105	10	..	
106	51	10	..
107	14	1	..
108	10	2	1
109	10	..	..
110	6	..	..
110-1	11	..	2
111	56	2	2
112	36	1	2
113	68	5	6
114	23	..	..
117	41	..	..
118	20	6	..
119	68	9	1
120	21	..	5
122	1	..	..
..	2	..	..
124	17	..	1
125	55	..	..
126	12	..	1
127	167	..	7
128	23	..	..
129	266	2	9
130	22	..	3
131	57	5	1
132	9	..	
133	30	..	1
134	16	..	..
136	9	..	..
137	40	..	2
138	96	2	7
139	48	2	3
140	26	4	2
141	103	3	3
142	1	..	..
144-2	117	..	..
146	199	4	4
147	26	1	1
148	81	1	12
149	2	..	..
150	10	..	1
151-3	10	..	2
152	62	19	8
153	105	18	15
154	10	..	..
155	24	2	3
156	7	..	..
157	3	..	..
158	5	..	..
159	1	..	..
160	6	1	..
161	36	1	2
162	48	2	..
163	25	11	4
164	131	8	5
165	8	..	..
166	12	..	3
167	48	..	4
168	19	..	1
169	155	4	7
170	54	2	7
171	55	7	3
172	27	..	1
172-2	43	5	2
174	85	2	3
175	14	2	1
177	13	..	1
179	108	..	4
180	91	3	4
181	24	..	1
182	39	..	3
184	10	2	1
186-3	41	8	..
187	31	4	..
190	152	1	2
191	13	..	..
192	17	..	1
193	16	..	..
195-3	7	1	..
200	51	2	..
201	14	1	..
202	3	1	..

TIRUPATHUR DIVISION—*cont*

Survey numbers.	*Total number of trees.*	*Dead trees.*	*A trees.*
(1)	(2)	(3)	(4)
Puliyur—cont.			
202-1	1	..	..
202-2	2	2	..
203-1	2	..	..
203-2	17	6	..
203-3	3	6	
204	23	..	..
205-2	20	..	..
206	1	1	..
208	12	..	2
209	3	..	..
212	1	..	..
213-1	5	..	..
216	5	..	..
217	10	3	..
218	10	..	..
220	1	1	..
221-1	1	..	..
221-2	18	..	..
222	59	9	3
222-3	29	..	..
223	9	..	3
224	22	..	2
225	4	..	..
229	66	3	1
234	9	..	..
239	20	1	..
240	9	..	1
241	9	..	..
243	11	..	..
244	2		
245	7	1	
246	13		..
Total ..	5,468	486	257
Government wast	3,933	626	233
Grand total	9,401	1,112	490
4. *Melpet.*			
1	13	..	1
7	20	..	1
8	1	..	..
11	18	..	..
12	9	..	..
13	9	2	1
14	22	1	..
15	49	1	2
16	41	..	..
17	2	..	..
18	26	..	..
19	3	..	..
23	9	..	1
25	2	2	..
26	3	2	1
28	2	1	..
30	5	3	..
34	2	1	..
36	4	..	..
36-2	1	1	..
37	23	18	..
38	4	1	1
39	22	12	..
40	42	..	..
41	5	..	..
42	10	..	1
43	1	..	..

Survey numbers.	*Total number of trees.*	*Dead trees.*	*A trees.*
(1)	(2)	(3)	(4)
Melpes—cont.			
44	17	2	3
101	8	1	1
102	18	8	2
104	8	1	4
105	9	4	..
106	5	..	..
108	1	..	..
110	25	8	..
112	35	6	..
113	11	3	2
115	45	24	1
118	5	1	..
119	4	..	..
120	27	10	1
45	19	1	1
46	13	..	4
48	20	..	1
50	9	2	..
51	63	1	2
55	4	..	..
56	9	2	..
57	8	..	..
58	2	..	..
61	1		..
64	1	..	..
65	1	..	..
66	8	..	2
67	2	1	..
69	5	..	..
70	49	1	..
72	37	3	..
75	13	..	..
80	8	..	..
84	26	9	..
85	6	..	2
86	25	..	1
90	2	2	..
91	39	29	4
95-2	8	..	..
98	12	7	1
99	32	10	4
100	31	5	6
121	26	2	..
122	9	7	..
123	3	1	1
126	3	..	..
129	7	3	..
130	8	..	..
131	9	5	1
132	13	4	..
134	3	2	..
135	60	7	1
136	2	..	1
137	11	..	..
138	7	6	..
139	3	3	..
Total ..	1,187	226	55
Unreserve ..	134	66	5
Grand total ..	1,321	292	60

TIRUPATHUR DIVISION—*cont.*

Survey numbers.	*Total number of trees.*	*Dead trees.*	*A trees.*
(1)	(2)	(3)	(4)
5 Kiloor Patta.			
18	36	2	..
19	15	..	..
20	11	..	..
51-1	10	..	..
75	11	4	..
78	4	1	..
84	11	..	..
91	4	..	..
93	9	..	..
101-1	10	1	..
121	1	..	..
122	13	3	..
124	14	..	2
128-1	2	..	..
132	2	..	..
136	6	..	..
143	30	..	..
148	77	3	..
149	14	..	..
149-1	18	..	1
150	58	..	..
152-1	4	1	..
153	59	..	5
154-1	78	..	4
	442	21	48
Total ..	939	36	60
Government wastel ands ..	217	14	14
Grandt otal ..	1,156	50	74
6. Sundarampalli			
20-1	9	..	..
20-2	1	..	..
21	16	..	1
35	2	..	..
36	1	..	..
122	1	..	..
123	3	..	..
126-1	2	..	1
126-2	1	..	1
127	1	..	..
128	3	..	..
129	3	..	1
136-2	3	..	1
136-7	2	..	..
136-8	19	..	..
137-3	2	..	..
137-4	1	..	..
137-8	5	..	..
143-1	25	..	..
143-8	2	..	..
147	50	..	..
155	3	..	..
156	1	..	..
160-1	6	..	..
160-2	1	..	..
161-1	2	..	..
162-1	6	..	..
162-2	3	..	..
163-2	2	..	..
164-1	9	..	..
164-2	5	..	1
164-1D	1	..	..
167-1	8	..	1
167-2	3	..	..
168-1	4	..	1
168-2	4	..	..
169	10	..	1
Total ..	220	..	11

Survey numbers.	*Total number of trees.*	*Dead trees.*	*A trees.*
(1)	(2)	(3)	(4)
7. *Kadirmangalam.*			
53	15	..	2
63	37	..	5
151-8	13	..	..
203	101	..	3
Total ..	166	..	10
8. *Anneri.*			
26-5	2	..	1
27-9	3	..	..
27-13	1	..	..
34-1	3	..	..
34-4	1	..	..
Total ..	10	..	1
9. *Ragupathiyur*			
12-1	8	..	3
13-1	39	..	7
13-2	1	..	..
18	234	..	26
19	77	.	7
20	2	.	.
22	15	.	3
23	5	.	1
24-1	12	.	.
25-1	3	..	..
25-2A	74	..	12
25-2B	59	..	2
25-20	29	..	..
25-2E	19	..	..
26-1A	1	..	..
30-1	1	..	..
31-1	1	..	..
Total ..	580	..	61
10. *Puthagarnam.*			
10-2	1	..	..
221-1	2	..	..
302-1	7	..	..
304-5	1	..	..
320-1	1	..	..
320-2	4	..	..
320-7	12	..	..
326-1	3	..	1
335-2	3	..	..
Total ..	34	..	1
Matrapalli.			
250	2	..	..
251	28	1	2
255-1	2	..	..
259	1	..	..
261	1	..	..
275-2	1	..	1
276-1	4	..	1
388-1	3	..	..
551-3	1	..	..
554	1	..	..
570-3	1	1	..
571-2	2	..	..
572-1B	4	..	1
573-1	15	..	1
573-2	2	..	..
573-3	1	..	..
574	6	..	..
Total ..	75	2	6

TIRUPATHUR DIVISION—*cont.*

Survey numbers. (1)	*Total number of trees.* (2)	*Dead trees.* (3)	*A trees.* (4)
	12. *Kurumberi.*		
91-1	1	..	..
96	2	..	..
147	2	..	..
174-1	2	..	..
175	1	..	..
177	5	..	..
178	1	..	..
179	1	..	..
180-1	1	..	..
610	8	..	..
619-1	3	1	..
625	1	..	..
632	4	..	..
633	1	..	..
635	2	..	..
637	1	..	..
640	3	..	..
642	3	..	..
186	2	..	..
226-4	1	..	..
430-4	4	..	..
507	1	..	..
539	3	..	1
540	14	1	1
541	6	1	..
545-2	4	..	..
545-3	17	..	..
565	9	..	2
566	5	..	..
569-6	1	1	..
573-1	20	..	..
574	6	..	1
595	1	..	..
596	1	..	..
602	2	..	..
609	1	..	..
694-2	5	..	1
694-3	1	..	..
694-4	11	..	..
695-2	1	..	..
695-3	3	..	..
695-4	7	..	..
695-5	2	..	1
695-6	1	..	..
695-7	4	..	..
695-9	1	..	..
695-10	1	..	..
695-11	1	..	..
696	1	..	..
697-1	1	..	..
697-4	1	..	..
700	1	..	..
701-1	3	..	..
715-1	1	..	..
715-2	3	..	..
716-1	1	..	..
716-3	1	..	..
716-4	2	..	..
Total	226	5	5
	13. *Simmanapudur.*		
10-2	1	..	..
13	1	..	..
14	5	..	1
15	19	..	..
72-1	1	..	..
73-1	15	..	3
73-2	2	..	..
74	7	..	1
75-1	1	..	..
591	37	1	3
592	1	..	..
593	1	..	..
	Simmanapudur—*cont.*		
650	7	..	..
652-1	2	..	..
680-2	1	..	..
680-4	2	..	..
680-5	1	..	..
681-1	1	..	..
684-1	1	..	..
684-2	2	1	..
684-7	2	..	..
684-8	1	..	..
684-9	1	..	..
685	1	..	..
686	2	..	..
687-4	1	..	..
689	1	..	
690-3	1	..	..
690-5	1	..	..
692-1	4	..	..
594	1	..	..
621	10	..	..
622	8	1	..
625	4	..	..
626	1	..	..
Total	115	3	8
	14. *Perambur.*		
157	47	..	3
234	2	..	..
235	7	..	1
349-2	1	..	..
421-1	4	..	1
421-2	5	..	..
422-1	13	..	..
423-3	5	..	1
467	1	..	..
501	2	..	..
507	7	..	..
Total	94	..	6
	15. *Visamangalam.*		
25-1	4	..	..
25-2	4	..	1
854	8	..	..
859-1B	2	..	..
859-1C	1	..	..
Total	19	..	1
	16. *Natham.*		
1-1	4	..	..
2-2	2	..	..
12-11	5	..	..
13	128	..	6
14-1	4	..	..
14-3	3	..	..
23-1	5	..	4
28-2	10	..	..
30-3	1	..	..
31-1	2	..	..
35	1	..	..
40-3	3	..	1
40-5	1	..	..
44-1	4	..	..
46-4	1	..	..
48	7	..	..
49	17	..	..
50	7	..	..
51	2	..	..

Survey numbers.	*Total number of trees.*	*Dead trees.*	*A trees.*
(1)	(2)	(3)	(4)
16. *Natham*—cont.			
54-1	1	..	..
67-1	23	..	1
67-2	135	..	23
68-1	1	..	..
68-2	3	..	..
68-3	2	..	..
69-1	9	..	1
69-2	8	..	..
69-3	2	..	1
69-4	9	..	..
69-5	15	..	1
70-7	15	..	1
70-8	3	..	..
77-10	2	..	..
77-10	2	..	..
77-11	2	..	..
77-14	2	..	..
78-3	36	..	..
78-4	1	..	1
78-5	2	..	..
78-20	1	..	..
78-21	1	..	..
78-24	1	..	..
79-10	4	..	..
79-12	3	..	..
80	2	..	..
113-2	9	..	..
114	10	..	1
123-4	13	..	..
124-2	2	..	..
140	21	..	..
Total	518	..	38
17. *Karunkalipatty*.			
1	4	..	..
6-6	1	..	..
11	1	..	..
14	1	..	..
15	3	..	2
Total	10	..	2
18. *Kakangarai*.			
12-1	6	..	..
12-16	1	..	..
12-20	4	..	..
32-1	8	..	..
32-6	3	..	..
32-7	1	..	..
36	1	..	..
36-1	3	..	..
36-3	1	..	..
36-4	1	..	..
109-2	1	..	..
193	2	..	..
164-1A	2	..	..
164-1F	1	..	..
Total	38	..	..
19. *Chinnakannalamaptti*.			
1-10	7	..	..
2-16	1	..	..
8-12	21	..	..
20	17	..	..
44-2	8	..	..
47-13	1	..	..
Total	55		

Survey numbers.	*Total number of trees.*	*Dead trees.*	*A trees.*
(1)	(2)	(3)	(4)
20. *Lakkinayakanpatti*.			
88-2	5	..	..
88-3	5	..	..
102	9	..	..
128-3	1	..	..
143-2	6	..	..
164-1C4	57	..	..
164-1C5	6	..	..
164-1D	15	..	..
164-2	1	..	..
167-3	21	..	..
188-2A	1	..	..
190	3	..	..
194	6	..	..
237-2	6	..	..
238-1	1	..	..
255-1	2	..	..
257	3	..	..
258	23	..	..
259	233	..	..
Total	404	..	..
21. *Avalnayankampatti*.			
	22	1	..
Total	22	1	..

Remarks:—No survey number given in the field book.

Survey numbers.	*Total number of trees.*	*Dead trees.*	*A trees.*
22. *Atturkuppam*.			
273	1	..	..
274	13	..	2
275	1	..	1
464-2	2	..	..
467-2	5	..	1
Total	22	..	4
23. *Vettapattu*.			
155-3	3	..	..
155-4	2	..	..
155-6	1	..	..
206-3	4	..	..
212-3	3	..	..
212-4	4	..	..
212-9	3	..	..
212-10	1	..	..
220-4	2	..	..
Total	23	..	..
24. *Nariyeneri*.			
8-15	2	..	..
11-2	3	..	..
11-7	1	..	..
142-3	4	..	..
169-1	4	..	1
180-5	1	..	..
186	2	..	..
201-15	1	..	1
267-1	12	..	..
Total	30	..	2

TIRUPATHUR DIVISION—*cont.*

Survey numbers. (1)	Total number of trees. (2)	Dead trees. (3)	'A' trees. (4)
25. *Mallapalli.*			
297-1	1	..	..
390	6	..	..
392	8	..	..
417	1	..	..
440-2	1	..	..
473	3	..	..
Total	20	..	..
26. *Bandarapalli.*			
131-1	1	..	..
195	9	..	..
196-1	1	..	..
Total	11	..	..
27. *Tirupathur.*			
89-2A 1-A1-B	2	..	..
Total	2	..	..
28. *Thiriyalam.*			
46-2	1	..	..
Total	1	..	..
29. *Palayakuppam.*			
201-10	1	..	..
201-12	2	..	..
208-5	1	..	..
208-6	3	..	..
208-8	2	..	..
	17	..	..
Total	26	..	..
30. *Achamangalam.*			
165-7	3	..	..
208-2	5	..	..
Total	8	..	..
31. *Bainapalli.*			
117-1	6	..	..
Total	6	..	..
32. *Vellakalnatham.*			
74/1A2	1	..	..
119/1A	5	..	..
Total	6	..	..

Survey numbers. (1)	Total number of trees. (2)	Dead trees. (3)	'A' trees. (4)
33. *Kannayakanpatti.*			
39/8	2	..	..
95/2	4	..	..
119/3	18	..	3
Total	24	..	3
34. *Periyagam.*			
56/1	4	..	1
116/1	3	..	2
116/5	22	..	1
116/16	2	..	1
159/8	52	..	12
Total	83	..	16
35. *Malaitirupathur.*			
1	31	3	..
2	12	2	2
4	15	4	2
6	12	5	1
14	12	..	..
15	28	11	2
16	6	5	1
17	4	1	..
18	15	6	1
27	15	2	2
29	2	..	..
29	1	..	..
32	3	..	..
33	1	..	..
33/1	1	1	..
38	6	1	..
39	1	..	..
41	3	..	..
43	3	..	..
66	4	..	1
68	1	..	..
71	16	..	..
76	1	..	..
Total	193	41	12
Government Waste	117	44	4
Grand Total	310	85	16
36. *Chembarai.*			
1	3	1	..
2	5	5	..
7	1	1	..
8	1	..	..
9	14	13	..
10	3	3	..
11	40	38	..
12	15	11	4
13	12	12	2
14	7	7	..
15/2	4	..	..
16	1	1	..
17	7	..	..
18	1	..	1
27	4	..	..
28	3	..	..
30	14	11	..
31	11	..	..
32	8	..	2
34	12	..	3
35	9	7	..
37	8	3	1

36. *Chembarai*—cont.

Survey numbers.	*Total number of trees.*	*Dead trees.*	*A trees.*
(1)	(2)	(3)	(4)
39	1	1	..
40	1	..	..
41/4	4	..	..
43	2	..	..
45	5	3	..
51	3	..	..
52	4	1	..
54	2	..	..
56	7	..	..
59	16	1	..
60	2	..	..
61	1	..	..
64	13	12	..
67	4	4	..
68/2	3	..	..
68/3	5	..	..
69	4	4	..
70	1	1	..
77	1	..	..
78	4	..	..
81	11	10	..
85	5	1	..
93	8	7	..
101	9	..	3
102	6	4	1
Total	305	162	17

37. *Malaiyandipatti.*

Survey numbers.	*Total number of trees.*	*Dead trees.*	*A trees.*
1	18	4	4
2	15	6	1
3	15	3	1
6	101	8	9
7	192	11	13
8	91	13	10
9	81	15	6
10	346	41	48
12	29	1	2
13	5	..	..
17	10	1	..
22	14	..	..
25	1	..	..
28	5	..	..
34	24	16	..
35	16	..	1
39	3	..	..
39/1	36	21	3
40	4	2	..
42	16	3	2
42	6	3	2
42/1	16	16	2
43	59	17	3
43/1	65	36	2
44	33	15	5
45/2	2	1	..
49	9	..	..
50	6	..	..
51	44	2	6
Total	1,262	235	120
Government Waste	66	9	4
Grand Total	1,328	244	124

38. *Kombai.*

Survey numbers.	*Total number of trees.*	*Dead trees.*	*A trees.*
9	8	7	1
38	25	21	..
44	45	37	..
98/1	24	24	..

38. *Kombal*—cont.

Survey numbers.	*Total number of trees.*	*Dead trees.*	*A trees.*
(1)	(2)	(3)	(4)
99	49	16	2
101	11	8	..
Not noted in field book	320	86	14
Total	482	199	17
Government Waste	346	164	32
Grand Total	828	363	49

39. *Chithoor.*

Survey numbers.	*Total number of trees.*	*Dead trees.*	*A trees.*
3	25	14	1
6	3	..	..
7	6	..	..
8	1	..	..
9	6	..	1
10	6	2	1
12	1	..	..
15	24	2	1
19	10	6	..
21	4	..	..
22	15	..	1
26	3	..	..
30	7	5	..
32	10	4	..
35	4	1	..
39	1	..	..
40	1	1	..
41	3	..	1
43	2	..	..
47	10	1	1
48	1	..	..
50	21	..	1
52	9	2	..
53	1	..	1
53/2	3	1	1
54	6	..	1
55	1	..	..
56	3	..	..
58	74	..	1
59	4	..	..
Total	265	39	12
Government Waste	3	..	..
Grand Total	268	39	12

40. *Arumalpattu.*

Survey numbers.	*Total number of trees.*	*Dead trees.*	*A trees.*
2	5	..	..
3	4	..	..
4	114	1	3
6	2	..	..
9	80	..	4
10/1	1	..	..
10/3	3	1	2
11/2	3	..	1
11/3	1	..	..
12	3	1	2
13	2	..	..
14	3	..	..
15	14	..	..
16	14	1	1
17	1	..	..
17	13	..	1
18	13	..	2
19	28	..	2
19	2	..	..
24	1	..	..
25	2	..	..
27	22	..	..
29	40	..	..
28	14	..	1
3[illegible]	8	..	2

TIRUPATHUR DIVISION—*cont.*

40. *Arumalpattu*—cont.

Survey numbers. (1)	Total number of trees. (2)	Dead trees. (3)	A trees. (4
32;2	5	..	..
34	16	1	..
34/2B	5	..	1
36/2A	1	..	..
36/2C	3	..	2
37	1	..	..
39-1/13	36	..	10
41	14	..	..
42/1	3	..	..
42/2	8	..	..
42/3	3	..	..
44	2	..	1
45	12	..	..
Total	502	5	35
Government Waste	50	6	..
Grand Total	552	11	35

41. *Pudur.*

Survey numbers. (1)	Total number of trees. (2)	Dead trees. (3)	A trees. (4
7	7	..	..
9	55	2	1
11/1C	1	..	..
11/2-C	3	..	..
14	13	..	..
16	2	..	..
18/1	6	1	..
18/2	13	..	..
19/1	15	..	..
19/2	34	3	1
19/3	16	..	..
26	4	..	..
27	1	..	..
37	1	..	..
37	5	..	..
38	4	..	..
49	1	..	..
50/1	4	..	..
50/3	6	..	..
51/1	8	..	..
51/2	23	3	1
57	6	..	..
60	1	..	..
61	5	..	..
62	5	1	..
63	7	..	..
65	16	2	2
66	8	1	..
67	9	1	1
68	8	..	..
69	17	4	..
70	91	..	2
73/2	24	..	..
73/1	2	..	..
74	7	..	..
91	2	1	..
108	7	..	..
113	6	..	..
114/2	7	..	..
116/1-B	12	2	..
123	1	..	..
124	8	2	1
125	4	..	2
126	17	..	6
127	2	..	..
129	11	..	..
130	1	..	..
140	2	..	..
144	58	2	5
145	2	1	..
Not noted in field book	101	26	7
Total	669	53	29
Government Waste	14	3	1
Grand Total	683	56	30

42. *Malalai.*

Survey numbers. (1)	Total number of trees. (2)	Dead trees. (3)	A trees. (4)
28	1	..	..
29	5	..	2
33	1	1	..
40	8	1	1
48	5	..	..
49	1	..	..
54	2	..	2
56	12	..	..
59	2	1	..
61	2	..	..
62	5	..	..
63	1	..	..
Total	45	3	5
Government Waste	4	..	..
Grand Total	49	3	5

Vadudalampattu.

Survey numbers. (1)	Total number of trees. (2)	Dead trees. (3)	A trees. (4)
52	3	2	..
Not noted in field book	705	79	43
Total	708,	81	43
Government Waste	81	26	6
Grand Total	789	107	49

44. *Velanguppam.*

Survey numbers. (1)	Total number of trees. (2)	Dead trees. (3)	A trees. (4)
Not noted in field book	99	5	17
Government Waste	..	..	..
Grand Total	99	5	17

45. *Nadukuppam.*

Survey numbers. (1)	Total number of trees. (2)	Dead trees. (3)	A trees. (4)
6	22	8	..
8	5	..	..
13/1	3	1	..
13/3	4	4	..
14	13	6	..
17-1/2	8	..	..
18	1	..	..
22	19	15	2
23	11	1	..
33	3	..	..
Not noted in field book	98	28	8
Total	187	63	10

46. *Meloor.*

Survey numbers. (1)	Total number of trees. (2)	Dead trees. (3)	A trees. (4)
42	13	4	..
Not noted in field Book	311	17	9
Total	324	21	9

TIRUPATHUR DIVISION—*cont.*

Survey numbers.	*Total number of trees.*	*Dead trees.*	*A trees.*
(1)	(2)	(3)	(4)
47. *Chinnavattanoor.*			
1/2	8	1	..
3	2	..	..
4	5	..	2
7	1	..	2
8	5	..	..
9/1	10	..	1
10	20	3	..
11	21	..	3
14	7	..	..
19	4	..	..
24	4	..	..
25	4	..	..
26	1	..	..
28	4	..	..
31	2	..	..
42/1	5	..	1
47	13	..	2
50	2	..	..
51	14	..	1
54	2	..	..
56	1	..	..
57	2	..	..
59	2	..	..
61	2	..	2
69	15	..	2
71	3	..	1
73	4	..	1
1 21	29	..	4
122	23	2	2
125	12	1	2
126	7	..	..
127	9	..	..
128	6	..	..
130	20	..	1
74	4	..	..
75	1	..	1
79	5	..	1
80	2	..	1
81	27	..	12
82	4	..	..
84	4	..	..
85	7	..	..
87	39	..	8
91	14	2	2
97/2	5	..	..
98/3	1	..	..
99	19	..	1
100	8	1	2
104	3	..	1
106	29	1	2
107	2	..	..
108	4	..	..
109	4	..	1
110	11	..	2
111	20	..	1
112	34	..	1
112	2	..	..
113	3	..	..
115	5	3	..
120	5	..	..
	531	14	63
Total			
	342	12	25
Government Waste			
Grand Total	873	26	88

Survey numbers.	*Total number of trees.*	*Dead trees.*	*A trees.*
(1)	(2)	(3)	(4)
48. *Kallavoor.*			
2	2	..	..
4	10	..	..
5	30	..	..
7	1	..	..
9-3	7	1	..
9-7	2	..	..
10-1	4	..	..
10-2	41	3	2
12-5	1	1	..
16-1	4	1	..
17	3	3	..
20-3	4	..	1
21	2	..	1
22	3	..	1
24	1	..	..
28	7	..	1
29	8	..	1
30	2	..	..
34	5	..	3
35-1	2	..	..
37	12	2	2
38-3	1	..	..
39	12	..	4
40	1	..	..
41	8	..	..
42	2	..	..
42-2	7	..	..
43	37	1	5
45	11	..	..
46	24	..	2
47	16	..	6
48	66	..	18
49	4	..	..
50	11	..	3
52-2	3	..	1
55-1	4	..	1
60	11	2	2
Total ..	369	14	55
Government waste	280	3	15
Grand Total ..	649	17	70
49. *Baloor.*			
Not noted in field book ..	108	18	..
Total ..	108	18	..
Government waste	24	..	..
Grand Total ..	132	18	..
50. *Rangasamudram.*			
Not noted in field book ..	49	6	3
Total ..	49	6	3
Government waste	23	..	1
Grand Total ..	72	6	4
51. *Palayapalyam.*			
Not noted in field book ..	325	1	11
Total ..	325	1	11
Government waste	184	8	6
Grand Total ..	**509**	**9**	**17**

TIRUPATHUR DIVISION—*cont.*

Survey numbers.	*Total number of trees.*	*Dead trees.*	*A trees.*
(1)	(2)	(3)	(4)
52. *Kambugudi.*			
Not noted in field book ..	8	5	..
Total	8	5	..
Government waste	19	..	1
Grand Total ..	27	5	1
53. *Thagarakuppam.*			
Not noted in field book ..	84	2	5
Total ..	84	2	5
Government waste	29	7	6
Grand Total ..	113	9	11
54. *Cherkanoor.*			
1	3	3	..
2	1	..	..
4	1	..	..
7	22	11	4
8	6	5	..
9-2	7	..	1
11	1	..	..
17-2	6	..	..
19	4	..	1
20	1	..	..
24-5	1	..	..
25-6	8	1	..
27	3	..	..
27-3	8	..	1
31-1	13	..	..
35	5	1	1
35-1	16	2	4
36-1	3	..	..
36-2	1	..	..
38-2	3	..	1
40	1	..	..
42-3	1	..	..
44	22	1	2
47	15	..	2
48-2	7	..	..
50	4	3	..
51	14	..	3
54	6	1	1
53	18	..	3
57	1	..	..
57-3	3	1	..
Total	206	29	24
Grand Total ..	206	29	24

Survey numbers.	*Total number of trees.*	*Dead trees.*	*A trees.*
(1)	(2)	(3)	(4)
55. *Perumpalli.*			
Not noted in field book ..	858	72	62
Total ..	858	72	62
Government waste	30	9	2
Grand Total ..	888	81	64
56. *Naduvoor.*			
Not noted in field book ..	118	34	8
Total ..	118	34	8
Government waste	..	..	..
Grand Total ..	118	34	8
57. *Kudagumalai.*			
Not noted in field book ..	235	3	15
Government waste	..	..	..
Grand Total ..	235	3	15
58. *Kilanoor.*			
18	3	..	1
74	3	1	..
89-2	4	2	1
Not noted in field book ..	92	44	..
Total ..	102	47	2
Government waste	16	4	1
Grand Total ..	118	51	3
59. *Chengam.*			
	632	..	5
Total ..	632	..	5
60. *Koottathur.*			
238-1	767	..	92
230, 235	118	..	9
236-2	127	..	7
231	356	1	38
Total ..	1,368	1	146

APPENDIX XVII B.

VILLAGE WAR ABSTRACT OF PATTA SANDAL IN TIRUPATHUR DIVISION.

Serial number and name of village.	Total trees enumerated in patta.				Total trees enumerated in unreserves poramboke waste.				Total.			
	Saplings.	Number of trees in various girths.	Deed trees.	'A' trees.	Saplings.	Number of trees in various girths.	Dead trees.	'A' trees.	Saplings.	Number of trees in various girths.	Dead trees.	'A' trees.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Tirupathur taluk—												
1 Nellipattu	..	574	134	23	..	101	13	3	..	675	147	26
2 Nellivasal	..	756	116	33	..	966	140	43	..	1,722	256	76
3 Puliyur	..	5,468	486	257	..	3,933	626	233	..	9,401	1,112	490
4 Melpet	2	1,187	226	55	..	134	66	5	2	1,321	292	60
5 Kiloor-Patta	..	939	36	60	..	217	14	14	..	1,156	50	74
6 Sundarampalli	..	220	..	11	..	..	..	..	..	220	..	11
7 Kadiramangalam	..	166	..	10	..	..	..	..	..	166	..	10
8 Anneri	..	10	..	1	..	..	..	..	..	10	..	1
9 Ragupathiyur	..	580	..	61	..	..	..	..	..	580	..	61
10 Puthagaram	..	34	..	1	..	..	..	..	..	34	..	1
11 Matrapalli	..	75	2	6	..	..	..	..	..	75	2	6
12 Kurumberi	..	226	5	5	..	..	..	..	..	226	5	5
13 Simmanapudur	..	115	2	8	..	..	..	..	..	115	2	8
14 Perambut	..	94	..	6	..	..	..	..	..	94	..	6
15 Vishamangalam	..	19	..	1	..	..	..	..	..	19	..	1
16 Natham	..	518	..	38	..	..	..	..	..	518	..	38
17 Karunkalipatti	..	10	..	2	..	..	..	..	..	10	..	2
18 Kakangarai	..	38	..	..	..	..	..	..	..	38	..	..
19 Chinnakannalampatti	..	55	..	..	..	..	..	..	..	55	..	..
20 Lakkinayakanpatti	..	404	..	..	..	..	..	..	..	404	..	..
21 Avalnayakampatti	..	22	1	..	..	..	..	..	..	22	1	..
22 Atturkuppam	..	22	..	4	..	..	..	..	..	22	..	4
23 Vettapattu	..	23	..	..	..	..	..	..	..	23	..	..

24 Nariyeneri	..	30	..	3	..	..	..	..	..	30	..	3
25 Mallapalli	..	20	..	..	..	..	..	..	..	20	..	..
26 Bandarapalli	..	11	..	..	..	..	..	..	..	11	..	..
27 Tirupathur	..	2	..	..	..	..	..	..	..	2	..	..
28 Thriyalam	..	1	..	..	..	..	..	..	..	1	..	..
29 Palayakuppam	..	26	..	..	..	..	..	..	..	26	..	..
30 Achamangalam	..	8	..	..	..	..	..	..	..	8	..	..
31 Vellakalnatham	..	6	..	..	..	..	..	..	..	6	..	..
32 Bainapalli	..	6	..	..	..	..	..	..	..	6	..	..
33 Kasinayakan Patti	..	24	..	3	..	..	..	..	..	24	..	3
34 Periyagram	..	83	..	16	..	..	..	..	..	83	..	16
35 Malaitirupathur	..	193	41	12	..	117	44	4	..	310	85	16
36 Chembarai	..	305	162	17	..	..	..	..	..	305	162	17
37 Malayandipatti	..	1,262	235	120	..	66	9	4	..	1,328	244	124
38 **Kombai**	..	482	199	17	..	346	164	32	..	828	363	49
39 Chittoor	..	265	39	12	..	3	..	..	..	268	39	12
40 Arumalpattu	..	502	5	35	..	50	6	..	..	552	11	35
41 Pudur	..	669	53	29	..	14	2	1	..	683	55	30
42 Molalai	..	45	3	5	..	4	..	..	..	49	3	5
43 Vedudalampattu	..	708	81	43	..	81	26	6	..	789	107	49
44 Velanguppam	..	99	5	17	..	..	..	..	..	99	5	17
45 Nadukuppam	..	187	63	10	..	..	..	..	..	187	63	10
46 Meloor	..	324	21	9	..	..	..	..	..	324	21	9
47 Chinnavattanoor	..	531	14	63	..	342	12	25	..	873	26	88
48 Kallavoor	..	369	14	55	..	280	3	15	..	649	17	70
49 Baloor	..	108	18	..	..	24	..	..	..	132	18	..
50 Rangasamudram	..	49	6	3	..	23	..	1	..	72	6	4
51 Palayapalayam	..	325	1	11	..	184	8	6	..	509	9	17
52 Kambugudi	..	8	5	..	..	19	..	1	..	27	5	1
53 Thagarakuppam	..	84	2	5	..	29	7	6	..	113	9	11
54 **Cherkanoor**	..	206	29	24	..	..	..	..	..	206	29	24

APPENDIX XVII B—*cont.*

VILLAGE WAR ABSTRACT OF PATTA SANDAL IN TIRUPATHUR DIVISION.

Serial number and name of village.	*Total trees enumerated in patta.*				*Total trees enumerated in unreserves proamboke waste*				*Total*			
	Saplings.	*Number of trees in various girths.*	*Dead trees.*	*'A' trees.*	*Saplings*	*Number of trees in various girths.*	*Dead trees*	*'A' trees.*	*Saplings.*	*Number of trees in various girths.*	*Dead trees*	*'A' trees.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
55 Perumballi	..	858	72	62	..	30	9	2	..	888	81	64
56 Naduvor	..	118	34	8	..	..	..	..	..	118	34	8
57 Kudaugmalai	..	235	3	15	..	..	..	..	..	235	3	15
58 Kilanoor	..	102	47	2	..	16	4	1	..	118	51	3
Total	2	19,806	2,160	1,178	..	6,979	1,153	402	2	26,785	3,313	1,580
Chengam taluk (incomplete)—												
1 Forest Rest House	..	632	..	5	..	..	..	..	..	632	..	5
2 Kootathur	..	1,368	1	146	..	..	..	..	..	1,368	1	146
Total	..	2,000	1	151	..	..	..	..	..	2,000	1	151

APPENDIX XVIII.

STATEMENT SHOWING DETAILS OF VILLAGE AND RESERVES FALLING UNDER THE FIRE REWARD SYSTEM.

Serial number and name of village. (1)	*Name of reserve and unreserve to be fire protection.* (2)	*Area in ha.* (3)	*Total area inha* (4)
I. *Tiruvannamalai Range*	NIL.		
II. *Sathanur Range* :—			
1 Bimarapatti	Valasamalai reserved'forest.	526·09	526·09
2 Gurukal mur	Do.	121·40	121·40
3 Melvalasai	Do.	728·43	728·43
4 Chinnavalasai	Do.	1,011·71	1,011·71
5 Ulchekkadi	Do.	687·97	687·97
6 Ulchekkadi	Nathampalli reserve forest	323·74	323·74
7 Athipadi	Do.	485·62	485·62
8 Puliyampatti	Do.	526·09	526·09
9 Pudurchekkadi	Do.	364·21	364·21
10 Kalnathur	Do.	202·34	202·34
11 Nerukkunni	Do.	202·34	202·34
12 Navakkal	P. Swamimalai reserve forest	1,052·18	1,052·18
13 Paliyankottai	Do.	485·62	485·62
14 Kodiyanur	Do.	728·43	728·43
15 Thoduthampalayam	Do.	202·34	202·34
III. *Chengam Range* :—			
16 Gunreddi	Pilamarathur reserve forest	272·76	307·56
	Unreserve	34·80	
17 Vavakallur	Pilamarathur reserve forest	210·44	254·95
	Unreserve	44·51	
18 Timirimarathur	Pilamarathur reserve forest	161·88	206·39
	Unreserve	44·51	
19 Pilamarathur	Pilamarathur reserve forest	379·19	552·39
	reserve .	173·20	
20 Kalyanamandai	Pilamarathur reserve forest	210·44	550·37
	Nallapattu reserve forest	155·40	
	Unreserve	184.53	
21 Velichanur	Pilamarathur reserve forest	331·84	396·59
	Unreserve	64·75	
22 Vannankuttai	Pilamarathur reserve forest	85·35	352·07
	Thenmalai reserve forest	131·92	
	Unreserve	34·80	
23 Kilsilambadi	Pilamarathur reserve forest	41·68	99·15
	Unreserve	57·47	
24 Melsilambadi	Pilamarathur reserve forest	260·21	501·81
	Thenmalai reserve forest	98·74	
	Unreserve	142·86	

APPENDIX XVIII.

STATEMENT SHOWING DETAILS OF VILLAGE AND RESERVES FALLING UNDER THE FIRE REWARD SYSTEM.

Serial number and name of village. (1)	*Name of reserve and unreserve to be fire protection.* (2)	*Area in ha.* (3)	*Total area in ha.* (4)
25 Thettur and Thoppur	Nallapattu reserve forest	50·18	174·01
	Unreserve	123·83	
26 Ondikuriyanur	Nallapattu reserve forest	38·84	38·84
27 Kuriyanur	Nallapattu reserve forest	38·84	109·26
	Unreserve	70·42	
28 Nallapattu	Nallapattu reserve forest	151·35	281·25
	Unreserve	129·90	
29 Chinnavavakuttai	Nallapattu reserve forest	123·83	202·34
	Unreserve	78·51	
30 Kuttathur	Nallapattu reserve forest	108·46	234·72
	Unreserve	126·26	
31 Kuthaneri	Nallapattu	68·39	184·13
	Unreserve	115·74	
32 Valakad	Nallapattu reserve forest	451·63	497·76
	Unreserve	46·13	
33 Natchamalai	Nallapattu reserve forest	207·60	207·60
34 Paderi	Do.	79·32	79·32
35 Molayanur	Nallapattu reserve forest	127·07	263·04
	Unreserve	135·97	
36 Kilvilamuchi	Nallapattu reserve forest	48·56	265·88
	Unreserve	217·32	
37 Melvilamuchi	Nallapattu reserve forest	59·89	99·55
	Unreserve	39·66	
38 Melthatiapet	Nallapattu reserve forest	259·81	566·56
	Thenmalai reserve forest	214·89	
	Unreserve	91·86	
39 Padapanjamarathur	Thenmalai reserve forest	244·02	314·44
	Unreserve	70·42	
40 Pelakkanur	Thenmalai reserve forest	161·06	218·88
	Unreserve	87·82	
41 Mottur	Thenmalai reserve forest	159·45	216·51
	Unreserve	57·06	
42 Valamarathur	Nallapattu reserve forest	22·66	383·64
	Thenmalai reserve forest	167·54	
	Unreserve	193·44	
43 Palayanallur	Thenmalai reserve forest	463·77	531·35
	Unreserve	67·58	
44 Puliyur	Thenmalai reserve forest	384·45	650·33
	Unreserve	265·88	

APPENDIX XVIII.

STATEMENT SHOWING DETAILS OF VILLAGE AND RESERVEDS FALLING UNDER THE FIRE REWARD SYSTEM.

Serial number and name of village. (1)	*Name of reserve and unreserve to be fire protection.* (2)	*Area in ha.* (3)	*Total area in ha.* (4)
45 Kilthatiapet	Thenmalai Reserve Forest	268·71	300·68
	Unreserve	31·97	
46 Nellivoy	Thenmalai Reserve Forest	715·49	875·38
	Unreserve	159·89	
47 Erukampattu	Thenmalai Reserve Forest	509·09	726·41
	Unreserve	217·32	
48 Perumattam	Thenmalai Reserve Forest	610·67	610·67
49 Melpet	Thenmalai Reserve Forest	814·23	814·23
50 Chinnakilpet	Thenmalai Reserve Forest	744·62	744·62
51 Kilpet (or) Periyakilpet	Thenmalai Reserve Forest	936·44	936·44
52 Athipet	Thenmalai Reserve Forest	665·30	665·30
IV. Tirupathur Range—			
53 Kodagumalai	Andiappanur Reserve Forest	381·21	381·21
54 Kambugudi-*cum*-Nadur	Andiappanur Reserve Forest	223·79	1,026·28
	Inner Javadi Reserve Forest	162·28	
	Pungulam Reserve Forest	263·04	
	Unreserve	377·17	
55 Rangasamudram	Andiappanur Reserve Forest	133·54	433·82
	Unreserve	300·28	
56 Palayapalayam	Inner Javadi Reserve Forest	343·58	728·44
	Unreserve	384·86	
V. *Alangayam Range—*			
57 Kottayur	Mangalam Reserve Forest	405·50	798·86
	Jolarpert Reserve Forest	364·22	
	Unreserve	29·14	
58 Athanavur	Jolarpet Reserve Forest	157·83	402·66
	Nagaluthu Extension	97·93	
	Unreserve	146·90	

APPENDIX XIX.

STATEMENT SHOWING THE ANNUAL FIRE REWARD AND FINES UNDER FOREST FIRE REWARD SYSTEM IN TIRUPATHUR DIVISION.

Year.	Tiruvannamalai Range.				Sathanur Range.			
	Reward fixed.	*Area burnt in Hec.*	*Fine.*	*Reward disbursed.*	*Reward fixed.*	*Area burnt in Hec.*	*Fine.*	*Reward disbursed.*
(1)	(2)	(3)	(4)	(5)	(6) RS. P.	(7)	(8) RS. P.	(9) RS. P.
1961–62	..	..	..	..	189	54·63	5 40	183 60
1962–63	..	..	..	..	189 00	36·42	3 60	185 40
1963–64	..	..	..	..	378 00	..	..	378 00
1964–65	..	..	..	..	378 00	74·87	7 40	370 60
1965–66	..	..	..	..	378 00	60·70	6 00	372 00
1966–67	..	..	..	..	..	..	..	..
1967–68	..	..	..	..	..	..	..	..
1968–69	..	..	..	..	..	..	..	..
1969–70	..	..	..	..	..	..	..	..
1970–71	..	..	..	..	378 00	..	..	378 00
1971–72	..	..	..	..	378 00	8·09	0 80	377 20
1972–73	..	..	..	..	378 00	..	..	378 00
1973–74	..	..	..	..	378 00	10·11	1 00	377 00
1974–75	..	..	..	..	378 00	34·40	3 40	374 60
1975–76	..	..	..	..	378 00	10 11	1 00	377 00
Total	..	..	..	..	3,780 00	289·33	28 60	3,75140

APPENDIX XIX—*cont.*

STATEMENT SHOWING THE ANNUAL FIRE REWARD AND FINES UNDER FOREST FIRE REWARD SYSTEM IN TIRUPATHUR DIVISION—*cont.*

Year.	Chengam Range.				Tirupathur Range.			
	Reward fixed.	*Area burnt in hec.*	*Fine.*	*Reward disbursed.*	*Reward fixed.*	*Area burnt in hec.*	*Fine.*	*Reward disbursed.*
1—*cont.*	(10) RS. P.	(11)	(12) RS. P.	(13) RS. P.	(14) RS. P.	(15)	(16) RS. a.	(17) RS. P.
1961–62	278 91	..	..	278 91	37 25	2·43	0 12	37 13
1962–63	279 94	..	..	279 94	37 25	16·19	0 80	36 45
1963–64	560 22	..	..	560 22	74 50	..	..	74 50
1964–65	..	..	..	..	74 50	..	..	74 50
1965–66	559 05	..	..	559 05	74 55	..	..	74 55
1966–67	..	..	..	..	..	..	..	..
1967–68	..	..	..	..	..	..	..	..
1968–69	..	..	..	..	..	..	..	..
1969–70	..	..	..	..	..	..	..	..
1970–71	..	..	..	..	74 50	..	..	74 50
1971–72	..	..	..	..	74 50	2·02	0 20	74 30
1972–73	..	..	..	..	74 50	22·26	2 20	72 30
1973–74	..	..	..	..	74 50	46·54	4 60	69 90
1974–75	..	..	..	..	74 50	44·92	4 44	70 06
1975–76	560 19	0 10	0 01	560 18	74 50	28·32	2 80	71 70
Total	2,238 31	0 10	0 01	2,238 30	745 05	162·68	15 16	729 89

APPENDIX XIX—*cont.*

STATEMENT SHOWING THE ANNUAL FIRE REWARD AND FINES UNDER FOREST FIRE REWARD SYSTEM IN TIRUPATHUR DIVISION

	Alangayam Range.							*Total for the Division.*						
	Reward fixed.		*Area burnt in hecs.*	*Fine.*		*Reward disbursed.*		*Reward fixed.*		*Area burnt in hecs.*	*Fine.*		*Reward disbursed.*	
(1)	(2)		(3)	(4)		(5)		(6)		(7)	(8)		(9)	
	RS.	P.		RS.	P.	RS.	P.	RS.	P.		RS.	P.	RS.	P.
1961–62	44	36	..	..		44	36	549	52	57·06	5	52	544	00
1962–63	25	34	..	..		25	34	531	53	52·61	4	40	527	13
1963–64	50	68	6·47	0	32	50	36	1,063	40	6·47	0	32	1,063	08
1964–65	50	68	..	..		50	68	503	18	74·87	7	40	495	78
1965–66	50	68	16·19	0	80	49	88	1,062	28	76 89	6	80	1,055	48
1966–67	..		..	..		..		..		..	..		..	
1967–68	..		..	..		..		..		..	..		..	
1968–69	..		..	..		..		..		..	..		..	
1969–70	..		..	..		..		..		..	..		..	
1970–71	50	68	0·40	0	03	50	65	503	18	0 40	0	03	503	15
1971–72	50	68	14·57	1	44	49	24	503	18	24·68	2	44	500	74
1972–73	50	68	10·41	1	03	49	65	503	18	32·67	3	23	499	95
1973–74	50	68	12·14	1	20	49	48	503	18	68·79	6	80	496	38
1974–75	50	68	109·69	10	84	39	84	503	18	189·01	18	68	484	50
1975–76	50	68	..	..		50	68	1,06337		38·53	3	81	1,059	56
Total	525	82	169·87	15	66	510	16	7,289	18	621·98	59	43	7,229	75

APPENDIX XX.

DETAILED LIST OF SANDAL PLANTATIONS RAISED UNDER SANDAL WORKING CIRCLE TILL 1976-77 IN TIRUPPATHUR DIVISION.

Serial number and year.		*Name of range.*	*Name of R.F. and locality.*	*Area in ha.*	*Cost of raising of the plantations. (including maintenance).*	*Condition of the plantations.*	*Remarks.*
(1)		(2)	(3)	(4)	(5)	(6)	(7)
1	1963	Chengam	Tenmalai RF	2·83	324·29	Failure.	..
2	1963	Alangayam	Pungulam RF	2·83	230·96	Do.	Not traceable
3	1964	Do.	Do.	10·11	31·25	Do.	
4	1964	Do.	Do.	10·11	761·27	Do.	
5	1965	Tirupathur	Singarapet Extension RF.	2·83	199·33	Do	
6	1965	Alangayam	Pungulam RF	10·17	105·00	Do.	
7	1967	Do.	Do.	10·93	1,028·39	Do.	Do.
8	1968	Do.	Do.	30·00	5,842·22	Do.	
9	1969	Do.	Do.	10·10	883·27	Do.	
10	1970	Do.	Do.	10·10	995·53	Do.	
11	1973	Do.	Inner Javadi RF	0·40	1,375·40	65 per cent.	
12	1974	Chengam	Nallapattu RF (Kootathur).	4·00	2,559·35	Very poor stocking.	
13	1974	Tirupathur	Singarapet Extension RF	7·00	2,970·20	80 per cent.	
14	1974	Alangayam	Inner Javadi RF	4·00	4,562·47	52 per cent.	
15	1975	Chengam	Tenmalai RF (Melpet)	5·00	7,879·63	20 per cent.	
16	1975	Do.	Do. Perumattam	3·80	6,460·28	20 per cent.	
17	1975	Do.	Do. Puliyur	5·00	6,710·38	20 per cent.	
18	1975	Do.	Pelamarathur RF Kootathur	8·10	12,319·83	20 per cent.	
19	1975	Tirupathur	Singarapet Extension RF	9·00	2,430·00	50 per cent.	
20	1975	Alangayam	Jolarpet RF	9·40	3,364·28	25 per cent.	
21	1975	Do.	Inner Javadi RF	9·70	5,217·64	60 per cent.	
22	1976	Chengam	Pelamarathur RF (Kootathur)	15·00		15 per cent.	
23	1976	Tirupathur	Singarapet Extension RF (Puliyanur).	5·00	4,642·00	80 per cent.	
24	1976	Do.	Do. Malayandipatti	5·00	2,383·00	80 per cent.	
25	1976	Alangayam	Alangayam RF	20·00	14,286·00	50 per cent.	
26	1976	Do.	Inner Javadi RF	10·40	7,392·75	42 per cent.	
			Total ..	220·81			

APPENDIX XXI.

DETAILED LIST OF SANDAL PLANTATIONS RAISED UNDER SANDAL WORKING CIRCLE TILL 1976–77 IN TIRUPPATHUR DIVISION.

Serial number and year. (1)		*Name of range.* (2)	*Name of R.F. and locality.* (3)	*Area in ha.* (4)	*Cost of raising of the plantations (including maintenance).* (5)	*Condition of the plantations.* (6)	*Remarks.* (7)
			NATURAL SANDAL TENDING PLOTS.				
1	1970	Alangayam	Inner Javadi RF	20·00	137·00		
2	1971	Do.	Do.	17·00	282·00		
3	1972	Do.	Do.	20·00	949·00	..	..
4	1973	Chengam	Nallapattu RF	20·00	1,706·00	..	
5	1973	Do.	Palamarathur RF Kalayanamandai.	20·00	1,520·50	..	..
6	1973	Tirupathur	Mambakkam RF Mottur.	20·00	117·50	..	..
7	1973	Do.	Andippanur RF (Rajapalayam).	20·00	398·78	..	..
8	1973	Do.	Govindapuram RF	20·00	187·25	..	..
9	1973	Do.	Andiappanur RF	20·00	145·00	..	..
10	1973	Do.	Mambakkam RF	20·00	99·60	..	..
11	1973	Alangayam	Inner Javadi RF	20·00	1,433·70	..	..
12	1974	Chengam	Palamarathur RF (Kalayanamandai)	40·00	3,637·80	..	..
13	1974	Do.	Nallapattur RF (Kootathur).	20·00	2,336·50	..	..
14	1974	Tirupathur	Andiappanur RF	20·00	633·05	..	..
15	1974	Do.	Andiappanur Rajapalayam	20·00	454 05	..	..
16	1974	Do.	Mambakkam RF	20·00	478·56	..	..
17	1974	Do.	Mambakkam RF Mottur.	20·00	598·65	..	..
18	1974	Do.	Govindapuram RF	20·00	659·35	..	..
19	1974	Alangayam	Inner Javadi RF	38·70	3,285·75	..	..
20	1975	Chengam	Pelamarathur RF (Kootathur).	21·40	18,007·75	..	..
21	1975	Tirupathur	Singarapet Extension RF.	10·90	3,285·15	..	
22	1975	Alangayam	Inner Javadi RF	11·20	8,880·90	..	..
23	1976	Chengam	Pelamarathur RF Kootathur	20·00	3,240·80	..	..
24	1976	Tirupathur	Andiappanur RF	20·80	2,767·50	..	..
25	1976	Alangayam	Pungulam RF	12·00	6,414·60	..	..
			Total	511·65			

APPENDIX XXI-A.

STATEMENT SHOWING THE LIST OF EXISTING FARM FORESTRY PLANTATIONS IN TIRUPATHUR DIVISION.

Serial number and name of taluk. (1)	*Name of the Block.* (2)	*Name of the Range in which the area lies.* (3)	*Name of the Range raised.* (4)	*Year.* (5)	*Name of the plantations.* (6)
1 Tiruvannamalai	Tiruvannamalai	Tiruvannamalai	Tiruvannamalai	1961	Soriandal.
2 Do.	Do.	Do.	Do.	1961	Vengikal.
3 Chengam	Chengam	Chengam	Chengam F. F.	1961	Valayampattu.
4 Tiruvannamalai	Thurinjapuram	Tiruvannamalai	Tiruvannamalai	1961	Mallavadi.
5 Do.	Do.	Do	Do.	1961	Agaramsibbandi.
6 Tirupathur	Tirupathur	Tirupathur	Tirupathur	1961	Tirupathur tank-bed.
7 Tiruvannamalai	Thurinjapuram	Tiruvannamalai	Tiruvannamalai	1962	Maruthuvambadi
8 Chengam	Pudupalayam	Chengam	Chengam F.F.	1962	Karapattu.
9 Do.	Thandarampattu	Sethanur	Do.	1962	Radhapuram.
10 Do.	Chengam	Chengam	Do.	1962	Kayamapattu.
11 Tiruvannamalai	Tiruvannamalai	Tiruvannamalai	Tiruvannamalai	1962	Nochimalai.
12 Tirupathur	Tirupathur	Tirupathur	Tirupathur	1962	Tirupathur tank bed.
13 Tirupathur	Kandili	Tirupathur	Tirupathur	1962	Koratti.
14 Vaniyambadi	Perambattu	Alangayam	Alangayam	1962	Elayanagaram mitta.
15 Do.	Natrampalli	Do.	Do.	1962	Thumberimitta.
16 Tiruvannamalai	Tiruvannamalai	Tiruvannamalai	Tiruvannamalai	1963	Adaiyur.
17 Tiruvannamalai	Thurinjapuram	Do.	Do.	1963	Inamkariyandal.
18 Chengam	Chengam	Chengam	Chengam F.F.	1963	Thokkavady.
19 Do.	Thandrampet	Sathanur	Do.	1963	Thandrampet.
20 Do.	Do.	Do.	Do.	1963	Kurumaneri.
21 Do.	Thandarampattu	Sathanur	Chengam F.F.	1963	Radhapuram, Periyeri.
22 Do.	Do.	Do.	Do.	1963	Kilravandavady.
23 Do.	Pudupalayam	Chengam	Do.	1963	Munurmangalam
24 Tiruvannamalai	Thurinjapuram	Tiruvannamalai	Tiruvannamalai	1963	Oosambadi.
25 Do.	Do.	Do.	Do.	1963	Selapandal.
26 Tirupathur	Tirupathur	Tirupathur	Tirupathur	1963	Madapalli.
27 Do.	Do.	Do.	Do.	1963	Anneri.
28 Do.	Kandili	Do.	Do.	1963	Kurumberi.
29 Vaniyambadi	Pernambattu	Alangayam	Alngayam	1963	Elayangaram mitta.
30 Do.	Natrampalli	Do.	Do.	1963	Thumbevimitta.
31 Tiruvannamalai	Thurinjapuram	Tiruvannamalai	Tiruvannamalai	1964	Sorakolathur Periyeri.
32 Chengam	Pdupalayam	Chengam	Chengam FF	1964	Amandapudur.
33 Do.	Thandrampet	Sathanur	Do.	1964	Kilsirupakkam.
34 Do.	Do.	Do.	Do.	1964	Melsirupakkam.
35 Do.	Chengam	Chengam	Do.	1964	Kariyamangalam.
36 Do.	Do.	Do.	Do.	1964	Varadanthangal.
37 Tiruvannamalai	Thurinjapuram	Tiruvannamalai	Tiruvannamalai	1964	Chatram.

APPENDIX XXI-A—*cont.*

STATEMENT SHOWING THE LIST OF EXISTING FARM FORESTRY PLANTATIONS IN TIRUPATHUR DIVISION—*cont.*

Area in hactare. (7)	*Cost of expenditure.* (8)	*Espacement.* (9)	*Species raised.* (10)	*Felled year.* (11)	*Amount fetched.* (12)	*Yield in tonnes.* (13)	*Present condition.* (14)	*Remarks.* (15)
20-20	3,806·17	5 × 5 m.	Babul and miscellaneous.	1970	1,820·00	59	50 per cent.	..
20-00	4,132·16	Do.	Do.	1970	460·00	4	Verypoor proposed for restocking.	
32-37	5,752·63	Do.	Do.	1971 1974	5,731·50 3,000·00	50 82½	60 per cent.	..
20-20	6,095·67	Do.	Do.	1970 1974	6,100·00 1,100·00	190½	80 per cent.	..
50-00	4,644·82	Do.	Do.	1970	560·00	27	Very poor proposed for restocking.	
40-50	4,809·30	3·5 × 3·5	Babul ..	1973	2,600·00	22	75 per cent.	..
20-20	3,297·61	Do.	Babul and miscellaneous.	1972	808·00	20	Very poor proposed for restocking.	
15-47	11,740·58	5 × 5 m	Do.	1972 1974	5,670·00 2,050·00	103¾	(Out of 40·47 ha 25 has restocked during 1976.	
40-47	6,525·44	Do.	Do.	1973	324·00	8	Very poor proposed for restocking.	
40-47	6,526·43	Do.	Do.	1972 1974	4,245·00 235·00	162	50 per cent.	..
20-20	2,673·01	3.5 × 3.5	Do.	1972	1,051·00	23	40 per cent.	..
20-60	4,972·79	Do.	Babul.	1972	309·00		75 per cent.	..
60-70	12,987·70	Do.	Do.	1972	33,992·00	337¼	80 per cent.	..
72-40	8,667·45	Do.	Babul and miscellaneous.	1972	724·00	4	20 per cent.	Proposed for restocking.
51-00	9,192·38	Do.	Eucalyptus.	1972	561·00	1½	50 per cent.	..
50-58	10,392·80	Do.	Babul and miscellaneous.	1973 1975	12,192·10 2,000·00	148	80 per cent.	..
20-20	8,920·62	Do.	Do.	1973 1975	8,596·30 4,100·00	200	80 per cent.	..
60-70	17,805·65	Do.	Do.	1974	62,700·00	722	90 per cent.	..
23-07	14,743·68	Do.	Do.	1973 1974	4,842·60 470·00	67 5	80 per cent.	..
22-26	6,671·84	Do.	Do.	1974	31,220·00	494½	85 per cent.	..
18-21	..	Do.	Babul and miscellaneous.	..	..	..	Very poor proposed for restocking.	
17-81	14,743·68	Do.	Do.	1973 1974	9,261·20 2,550·00	226½ 15	70 per cent.	..
60-70	15,071·37	Do.	Do.	1973	9,744·00	398	60 per cent.	..
20-23	3,550·00	Do.	Do.				Proposed for restocking.	
1-21	..	Do.	Do.	..	..	..	Do.	
40-50	12,064·95	Do.	Do.	1973	23,989·35	120	50 per cent.	..
21-44	6,237·93	Do.	Do.	1973	278·82	5	Failure proposed for restocking	
40-50	10,039·18	Do.	Do.	1972	6,197·00	300	30 per cent.	Failure proposed for restocking.
42-90	15,131·58	Do.	Babul and miscellaneous.	..	..	..	25 per cent.	Retained permnently as per DFOs No. 13560/72 dated 18th April 1973
40-00	14,618·50	Do.	Eucalyptus.				50 per cent.	Do.
20-20	4,445·06	Do.	Do.	..	..	..	..	Proposed for restocking
24-28	10,387·10	Do.	Do.	1973 1974	1,107·00 16,107·60	27 407	80 per cent.	
24-28	7,046·17	Do.	Do.	1974	31,833·00	210	80 per cent.	
56-66	11,076·82	Do.	Do.	1974	17,010·00	137	70 per cent.	..
64-00	13,060·03	Do.	Do.	1974	20,040·00	124	70 per cent.	..
14-98	6,375·37	Do.	Do.	1975	6,195·00	70½	75 per cent.	..
20-20	4,726·50	Do.	Do.	1974	18,483·00	137	75 per cent.	..

APPENDIX XXI-A.

STATEMENT SHOWING THE LIST OF EXISTING FARM FORESTRY PLANTATION IN TIRUPATHUR DIVISION.

Serial number and name of taluk. (1)	*Name of the Block.* (2)	*Name of the Range in which the area lies.* (3)	*Name of the Range raised.* (4)	*Year.* (5)	*Name of the plantations* (6)
38 Tiruvannamalai	Kilpennathur	Tiruvannamalai	Tiruvannamalai	1964	Sellankuppam.
39 Do.	Tiruvannamalai	Do.	Do.	1964	Alaganandai.
40 Do.	Do.	Do.	Do.	1964	Athiandal.
41 Tirupathur	Tirupathur	Tirupathur	Tirupathur	1964	Agraharam.
42 Do.	Do.	Do.	Do.	1964	Thriyalam.
43 Do.	Do.	Do.	Do.	1964	Muthur.
44 Tiruvannamalai	Kilpennathur	Tiruvannamalai	Tiruvannamalai	1964	Kilpennathur.
45 Chengam	Chengam	Sathanur	Chengam F.F.	1965	Sorapanandal.
46 Do.	Pudupalayam	Chengam	Tiruvannamalai	1965	Melpudur.
47 Tirupathur	Tirupathur	Tirupathur	Tirupathur	1965	Achamangalam.
48 Do.	Kandili	Do.	Do.	1965	Adaiyur.
49 Vaniyambadi	Alangayam	Alangayam	Alangayam	1965	Govindapuram tank.
50 Tiruvannamalai	Tiruvannamalai	Tiruvannamalai	Tiruvannamalai	1966	Kilpennathur.
51 **Chengam**	Chengam	Chengam	Chengam FF	1966	Melpulidiyur
52 Vaniyambadi	Alangayam	Alangayam	Alangayam	1966	Alangayam Bit-I
53 Do.	Do.	Do.	Do.	1966	Alangayam Bit-II
54 Chengam	Chengam	Chengam	Chengam FF	1967	Perumattam
55 Vaniyambadi	Alangayam	Alangayam	Alangayam	1967	Pakkir eri.
56 Do.	Do.	Do.	Do.	1967	Goundan eri
57 Chengam	Chengam	Chengam	Chengam FF	1968	Chengam.
58 Do.	Thandrampet	Sathanur	Do.	1968	Velur
59 Vaniyambadi	Alangayam	Alangayam	Alangayam	1968	Andiappanur
60 Chengam	Pudupalayam	Chengam	Chengam FF	1969	Kottakulam
61 Do.	Chengam	Do.	Do.	1969	Anwarabad
62 Do.	Pudupalayam	Do.	Do.	1970	Kottakulam
63 Do.	Chengam	Do.	Do.	1971	Sundakkapalayam
64 Do.	Pudupalayam	Do.	Do.	1972	Eraiyur
65 Do.	Thandrampet	Sathanur	Do.	1972	Kanakkantheri Vadakantheri
66 Do.	Do.	Do.	Do.	1972	Tharadapattu
67 Do.	Pudupalayam	Chengam	Do.	1972	Melmudianur
68 Do.	Thandrampet	Sathanur	Do.	1973	Chettikuttai
69 Do.	Do.	Do.	Sathanur	1973	Viranam
70 Do.	Pudupalayam	Chengam	Chengam FF	1973	Melmudianur
71 Do.	Do.	Do.	Do.	1973	Thorapady small lake.
72 Do.	Do.	Do.	Do.	1973	Thorapady Big lake.
73 Tiruvannamalai	Kilpennathur	Tiruvannamalai	Tiruvannamalai Exten. FF	1973	Karikalambadi
74 Do.	Do.	Do.	Do.	1973	Kolathur

APPENDIX XXI—*cont.*

STATEMENT SHOWING THE LIST OF EXISTING FARM FORESTRY PLANTATIONS IN TIRUPATHUR DIVISION—*cont.*

Area in hacture. (7)	*Cost of expenditure.* (8)	*Espacement.* (9)	*Species raised.* (10)	*Feild year.* (11)	*Amount ferched.* (12)	*Yield in tonnes.* (13)	*Present conditions.* (14)	*Remarks.* (15)
20-20	4,093·74	3.5X3.5 m.	Babul and Misc.	1974	2,730·00	..	35 per cent.	Proposed for restocking.
20-20	3,446·05	Do.	Do.	..				Do.
20-20	4,576·10	Do.	Do.	1974	20,200·00	156	80 per cent.	..
40-50	10,960·76	Do.	Babul	1973	32,684·00	280	50 per cent.	–
25-50	10,946·27	Do.	Do.	1973	4,718·00	37	50 per cent.	–
10-20				1972	9,180·00	43·200		
30-35	9,300·00	Do.	Babul and miscellaneous.					Proposed for restocking.
30-35	7,436·07	Do.	Do.	1975	56,088·00	321½	85 per cent.	..
20-20	4,819·46	Do.	Babul.	1975	3,146·50	42	50 per cent.	..
30-40	9,081·45	Do.	Do.	1973	8,269·00	70	30 per cent.	Proposed for restocking.
30-00	7,394·17	Do.	Do.	1974	38,000·00	251	50 per cent.	..
30-40	6,684·37	Do.	Do.	1974	82,080·00	328	80 per cent.	..
20-00	4,400·00	Do.	Do.	..	..	..	..	Proposed for restocking.
29-95	7,240·83	Do.	Babul and Misc.	1975	26,700·00	250	75 per cent	..
21-60	6,734·39	Do.	Do.	1975	27,216·00	302	75 per cent.	..
10-70		Do.	Do.	1975	13,624·50	140	75 per cent	..
20-23	4,522·27	Do.	Do.	1976	34,500·00	..	60 per cent	..
11-30	4,174·25	Do.	Babul	1977	23,956·00	112	55 per cent	..
12-80		Do.	Do.	1977	55,296·00	228		
10-12	2,412·91	Do.	Babul and Misc.	..	..	..	70 per cent	..
16-19	4,110·56	Do.	Do.	..	..	..	65 per cent	..
14-00	2,415·41	Do.	Babul.	..	..	..	80 per cent	..
37-23	6,178·83	Do.	Babul and Misc.	..	..	..	80 per cent	..
13-00	2,657·32	Do.	Do.	..	..	..	80 per cent	..
40-00	6,865·80	Do.	Do.	..	..	..	85 per cent	..
40-47	8,422·55	Do.	Do.	..	..	..	85 per cent	..
46-00	12,938·82	Do.	Do.	..	..	..	70 per cen	..
23-00	6,769·00	Do.	Do.	..	..	..	50 per cent	..
27-50	6,120·08	Do.	Do.	..	..	..	80 per cent	..
23-00	5,147·75	Do.	Do.	..	..	..	80 per cent	..
23-70	4,550·50	Do.	Do.	..	..	..	80 per cent	..
20-00	4,397·09	Do.	Do.	..	..	..	80 per cent	..
15-60	4,525·33	Do.	Do.	..	..	..	70 per cent	..
25-00	4,800·00	Do.	Do.	..	..	..	90 per cent	..
46-00	6,817·10	Do.	Do.	..	..	..	75 per cent	..
37-00	12,666·44	Do.	Babul	..	..	..	80 per cent	..
53-00	16,294·95	Do.	Do.	..	..	..	80 per cent	..

APPENDIX XXI A.

STATEMENT SHOWING THE LITT OF EXISTING FARM FORESTRY PLANTATIONS IN TIRUPATHUR DIVISION.

Seaiai number and name of taluk· (1)	*Name of the Block.* (2)	*Name of the Range in which the area lies.* (3)	*Name of the Rang raised.* (4)	*Year.* (5]	*Name of the plantations.* (6)
75 Tiruvannamalai	Kilpennathur	Tiruvannamalai	Tiruvanramalai Extn. FF.	1973	Yerpakkam
76 Do.	Do.	Do.	Do.	1973	Sanipondi
77 Do.	Thurinjapuram	Do.	Do.	1973	S. Kariyandal
78 Do.	Do.	Do.	Do.	1973	Mannai
79 Chengam	Thandrampet	Sathanur	Chengam FF	1973	Tharadapattu pudu eri.
80 Do.	Do.	Do.	Do.	1973	Kilvanakkambadi
81 Tiruvannamalai	Tiruvannamalai	Tiruvannamalai	Tiruvannamalai FF	1973	Samudram
82 Tirupathur	Tirupathur	Tirupathur	Tirupathur	1973	Tirupathur tank bed.
83 Tiruvannamalai	Tiruvannamalai	Tiruvannamalai	Tiruvannamalai	1974	Samudram
84 Do.	Kilpennathur	Do.	Do.	1974	Somasipadiperieri
85 Do.	Do.	Do.	Do.	1974	Chitteri
86 Do.	Do.	Do.	Do.	1974	Sirunathur
87 Do.	Do.	Do.	Do.	1974	Kottaneri
88 Do.	Thurinjapuram	Do.	Do.	1974	Palleri
89 Do.	Do.	Do.	Do.	1974	Vadapulidiyur
90 Chengam	Pudupalayam	Chengam	Chengam FF	1974	Melpudur
91 Do.	Thandrampet	Sathnaur	Do.	1974	Kolandampattu
92 Do.	Do.	Do.	Do.	1974	Melkarippur
93 Tiruvannamalai	Tiruvannamalai	Tiruvannamalai	Do.	1974	Melchettaiaput
94 Do.	Do.	Do.	Do.	1974	Manjampaoondi
95 Chengam	Chengam	Chengam	Do.	1974	Pinjur
96 Do.	Do.	Do.	Do.	1974	Uchimalaikuppam
97 Do.	Do.	Do.	Do	1975	Nachipattu
98 Do.	Do.	Do.	Do.	1975	Kolanthangal
99 Do.	Do.	Do.	Do.	1975	Kuilam
100 Do.	Do.	Do.	Do.	1975	Thulukkanthangal
101 Do.	Do.	Do.	Do.	1975	Melpennathur
102 Do.	Do.	Do.	Do.	1975	Sanandal
103 Do.	Thandrampet	Sathanur	Do.	1975	Pondai
104 Do.	Do.	Do.	Do.	1975	Chinnayampet
105 Do.	Do.	Do.	Do.	1975	Malaiyanur Chekkady
106 Do	Do.	Do.	Do.	1975	Reddiyapalayam 2 Bits
107 Do.	Pudupalayam	Chengam	Do.	1975	Padi Agraharam
108 Do.	Do.	Do.	Do.	1975	Nandimangalam
109 Do.	Do.	Do.	Do.	1975	Melmudianur
110 Tiruvannamalai	Kilpennathur	Tiruvannamalai	Tiruvannamalai Extn. FF	1975	Thallambadi
111 Tiruvannamalai	Tiruvannamalai	Do.	Do.	1975	Mekkalur
112 Do.	Do.	Do.	Do.	1975	Kadambai

APPENDIX XXI-A—*cont.*

STATEMENT SHOWING THE LIST OF EXISTING FARM FORESTRY PLANTATIOS IN TIRUPATHUR DIVISION—*cont.*

Area in hactere. (7)	*Cost of expenditure.* (8)	*Espacoment.* (9)	*Species raised* (10)	*Fcild year.* (11)	*Amount ferched.* (12)	*Yield in tannes.* (13)	*Present condition.* (14)	*Remarks.* (15)
20–00	5,098·83	3·5X3·5	Babul.	..	..	..	90 per cent	..
15–00	4,029·00	Do.	Do.	..	..	..	90 per cent	..
12–00	4,279·50	Do.	Do.	..	..	..	80 per cent	..
26–00	8,609·41	Do.	Do.	..	..	..	75 per cent	..
26–50	5,264·50	Do.	Do.	..	..	..	80 per cent	..
69–00	19,824·83	Do.	Do.	..	..	..	80 per cent	..
54–00	15,006·42	Do.	Do.	..	..	..	75 per cent	..
42–80	18,146·45	Do.	Do	..	..	..	80 per cent	**1963 plantation restocked cost of raising in 1963 is is also included with this.**
65–00	21,072·70	Do.	Do.	..	..	..	80 per cent	
46–00	18,158·53	Do.	Do.	..	..	..	80 per cent	..
20–00	7,154·40	Do.	Do.	..	..	..	85 per cent	..
28–00	11,742·21	Do.	Do.	..	..	..	85 per cent	..
38–00	13,014·56	Do·	Do.	..	..	..	85 per cent	..
45–00	18,465·26	Do.	Do.	..	..	..	80 per cent	..
60–00	23,146·90	Do.	Do.	..	..	..	75 per cent	..
69–00	24,862·70	Do.	Babul and Misc.	..	..	..	85 per cent	..
27–50	10,824·40	Do.	Do.	..	..	..	70 per cent	..
25–10	9,640·56	Do.	Do.	..	..	..	70 per cent	..
27–60	10,865·26	Do.	Do.	..	..	..	80 per cent	..
16–20	4,987·13	Do.	Do.	..	..	..	70 per cent	..
20–20	6,520·25	Do.	Do.	..	..	..	75 per cent	..
31–10	11,465·14	Do.	Do.	..	..	..	80 per cent	..
28–30	10,038·10	Do.	Do.	..	..	..	75 per cent	..
16–02	6,203·15	Do.	Do.	..	..	..	75 per cent	..
18–70	7,165·40	Do.	Do.	..	..	..	80 per cent	..
14–60	6,171·95	Do.	Do.	..	..	..	85 per cent	..
28–30	9,988·85	Do.	Do·	..	..	..	80 per cent	..
14–00	5,106·70	Do.	Do.	..	..	..	75 per cent	..
23–20	7,875·02	Do.	Do.	..	..	..	80 per cent	..
20–20	6,724·78	Do.	Do.	..	..	..	70 per cent	..
26–70	9,309·75	Do.	Do·	..	..	..	80 per cent	..
17–30	5,423·50	Do.	Do.	..	..	..	70 per cent	..
42–00	13,019·40	Do.	Do.	..	..	..	80 per cent	..
41–50	12,718·20	Do.	Do.	..	..	..	85 per cent	..
29–60	10,381·25	Do.	Do.	..	..	..	80 per cent	..
25–30	6,625·50	Do.	Do.	..	..	..	85 per cent	..
30–40	7,057·00	3·5X3·5m	Babul and Misc.	..	..	..	85 per cent	..
30–20	9,116·30	Do.	Do.	..	..	..	80 per cent	..

APPENDIX XXI-A

STATEMENT SHOWING THE LIST OF EXISTING FARM FORESTRY PLANTATIONS IN TIRUPATHUR DIVISIGN.

Serial number and name of taluk. 1	*Name of the Block.* 2	*Name of the Range in which the area lies.* 3	*Name of the Range raised·* 4	*Year.* 5	*Name of the plantations.* 6
113 Tiruvannamalai	Tiruvannamalai	Tiruvannamalai	Tiruvannamalai Extn.F.F.	1975	Kalpoondi
114 Do.	Thurinjapuram	Do.	Do.	1976	Porkunam
115 Do.	Do.	Do.	Do.	1976	Sorakolathur perieri
116 Do.	Do.	Do.	Do.	1976	Kamalaputhur
117 Do.	Do.	Do.	Do.	1976	C. Andapattu
118 Do.	Do.	Do.	Do.	1976	Northampondi
119 Do.	Kilpennathur	Do.	Chengam FF	1976	Polakanam
120 Do.	Do.	Do.	Do.	1976	Kattamalayanur Anneri
121 Do.	Do.	Do.	Do.	1976	Kattamalayanur Putheri
122 Do.	Do.	Do.	Do.	1976	Kattamalayanur Manneri
123 Chengam	Pudupalayam	Chengam	Do.	1976	Korathampattu
124 Do.	Do.	Do.	Do.	1976	Panaiolaipady
125 Do.	Do.	Do.	Do.	1976	Karapattu
126 Do.	Do.	Do.	Do.	1976	Karapattu
127 Tiruvannamalai	Tiruvannamalai	Tiruvannamalai	Do.	1976	Melputtiyandal.
128 Do.	Do.	Do.	Do.	1976	Kilkachirapattu
129 Do.	Do.	Do.	Do.	1976	Vinnamalai
130 Do.	Do.	Do.	Tiruvannamalai FF	1976	Veraiyur
131 Do.	Do.	Do.	Do.	1976	Pavithram
132 Do.	Do.	Do.	Do.	1976	Nallavanpalayam
133 Do.	Do.	Do.	Do.	1976	Oddakudisal
134 Do.	Kilpennathur	Do.	Do.	1976	Keeranur
135 Do.	Do.	Do.	Do.	1976	Konalur
136 Do.	Do.	Do.	Do.	1976	Nadalaganandal.
137 Do.	Do.	Do.	Do.	1976	Rajanthangal.
138 Do.	Do.	Do.	Do.	1976	Vayalur
139 Do.	Do.	Do.	Do.	1976	Avoor
140 Do.	Tiruvannamalai	Do.	Drought prone afforestation Range	1976	Melkachirapattu
141 Do.	Do.	Do.	Do.	1976	Andampallam
142 Chengam	Pudupalayam	Chengam	Do.	1976	Endal
143 Do.	Do.	Do.	Do.	1976	Kallarapady
144 Do.	Do.	Do.	Do.	1976	Mashar
145 Do.	Do.	Do.	Do.	1976	Nammiyandal
146 Do.	Do.	Do.	Do.	1976	Nayambadi
					Total

APPENDIX XXI-A—*cont*.

STATEMENT SHOWING THE LIST OF EXISTING FARM FORESTRY PLANTATIONS IN TIRUPATHUR DIVISION—*cont*.

Area in hactare. (7)	*Cost of expenditure.* (8)	*Eseacoment.* (·)	*Species raised.* (10)	*Feild year.* (11)	*Amount fetched.* (12	*Yiela tonnes.* (13)	*Present condition.* (4)	*Remarks.* (15)
13–67	3,844·50	3·5×3·5m	Babul and Misc.	..	..	..	80 per cent	..
79–00	18,915·25	Do.	Do.	..	..	..	90 per cent	..
80–00	20,026·05	Do.	Do.	..	..	..	90 per cent	..
62–00	15,300·40	Do.	Do.	..	..	..	90 per cent	..
40–00	9,100·05	Do.	Do.	..	..	..	90 per cent	..
55–00	15,220·49	Do.	Do.	..	..	..	90 per cent	..
27–00	5,733·30	Do.	Do.	..	..	..	90 per cent	..
20–00	4,279·10	Do.	Do.	..	..	..	90 per cent	..
12–00	3,118·65	Do.	Do.	..	..	..	90 per cent	..
29–00	5,751·95	Do.	Do.	..		..	90 per cent	..
25–00	5,398·95	Do.	Do.	..	..	..	90 per cent	..
68–00	12,110·50	Do.	Do.	..	..	..	90 per cent	..
25–00	5,223·00	Do.	Do.	..	..	..	90 per cent	..
25–00	5,093·45	Do.	Do.	..	..	..	90 per cent	..
13–00	3,292·80	Do.	Do.	..	..	..	90 per cent	..
17–00	3,999·70	Do.	Do.	..	..	..	90 per cent	..
17–00	4,069·45	Do.	Do.	..	..	..	90 per cent	..
72–00	15,866·12	Do.	Do.	..	..	..	90 per cent	..
50–00	11,144·62	Do.	Do.	..	..	..	90 per cent	..
37–00	10,286a45	Do.	Do.	..	..	..	90 per cent	..
12–00	4,392·09	Do.	Do.	..	..	..	90 per cent	..
24–00	7,111·52	Do.	Do.	..	..	..	90 per cent	..
31–00	8,047·78	Do.	Do.	..	..		90 per cent	..
9–00	2,047·90	Do.	Do.	..	..	..	90 per cent	..
15–00	2,418·35	Do.	Do.	..	..	..	90 per cent	..
43–00	11,626·65	Do.	Do.	..	..	..	90 per cent	..
40–00	10,813·12	Do.	Do.	..	..	..	90 per cent	..
22–00	5,400·00	Do.	Babul	..	..	..	90 per cent	..
67–00	13,000·00	Do.	Do.	..	..	..	90 per cent	..
24–00	6,350·00	Do.	Do.	..	..	..	85 per cent	..
27–00	7,100·00	Do.	Do.	..	..	..	85 per cent	..
60–00	13,020·00	Do.	Do.	..	..	..	80 per cent	..
24–00	5,850·00	Do.	Do.	..	..	..	90 per cent	..
31–00	6,850·00	Do.	Do	..	..	..	90 per cent	..
4,556–57								

APPEDIX XXI-A.

STATEMENT SHOWING THE LIST OF EXISTING FARM FORESTRY PLANTATIONS IN TIRUPATHUR DIVISION

Serial number and name of taluk. 1	*Name of the Block.* 2	*Name of the Range in which the area lies.* 3	*Name of the Range raised.* 4	*Year.* 5	*Name of the plantations.* 6
		Avenue Plantations.			
147 Chengam	Pudupalayam	Chengam	Tiruvannamalai Extension FF	1976	Pachal to Nathavady Road
148 Do.	..	Do.	Do.	1976	Kanji to Agraharam Road.
149 Do.	..	Do.	Drought prone afforestation Range.	1976	Ammapalayam to Pudupalayam Road.
150 Tiruvannamalai	..	Tiruvannamalai	Do.	1976	Veraiyur to Thavalakulam Road.
		Canal Bank Plantations.			
151 Chengam	..	Sathanur	Do.	1976	Venapuram left bank canal
152 Do.	..	Do.	Sathanur	1972	Canal Bank

APPENDIX XXI—*cont.*

STATEMENT SHOWING THE LIST OF EXISTING FARM FORESTRY PLANTATIONS IN TIRUPATHUR—DIVISION—*cont.*

Area in hactare. (7)	*Cost of expenditure.* (8)	*Espacement.* (9)	*Species raised.* (10)	*Feild year.* (11)	*Amount fetched.* (12)	*Yield in tonnes* (13)	*Present condition.* (14)	*Remarks.* (15)
9·2 km. ..	12,672·70	10M ..	Tamarind, Delonix, peltophorum, Bassia latifolia	..	..	..	90 per cent	..
6·0 km. ..	8,462·40	10M ..	Do.	..	..	..	90 per cent	..
10·0 km. ..	11,640·80	10M ..	Tamarind, Delonix, regia, etc.	..	..	..	90 per cent	..
10·9 km. ..	15,755·25	10M ..	Pungam, Neem Ficus, etc.	..			90 per cent.	..
5-00 km. ..	1,667·75	2·5×2·5m	Eucalyptus hybrid only		..	..	Failure.	..
4·5 km. ..	1,929·32	..	Miscellaneous	..	..	..	Handed over to the Public Works Department on 7th November 1975, as per the order of the D. F O's Number 4509/74, dated 27th February 1975.	

APPENDIX XXI B.

STATEMENT SHOWING THE BLOCKWISE LIST OF FARM FORESTRY PLANTATIONS RAISED IN TIRUPATHUR DIVISION.

Serial number assigned in the map.	*Year*	*Name of the plantation.*	*Area in hec.*	*Name of the range raised.*	*Remarks.*
(1)	(2)	(3)	(4)	(5)	(6)
		NAME OF THE BLOCK (i) TIRUVANNAMALAI.			
1	1961	Seriandal	20·20	Tiruvannamalai Range	
2	1961	Vengikal	20·00	Do.	Proposed for restocking.
3	1962	Nochimalai	20·20	Do.	
4	1963	Adaiyur	50·58	Do.	
5	1964	Alaganandal	20·20	Do.	Proposed for restocking.
6	1964	Athiyandal	20·20	Do.	
7	1973	Samudram	54·00	Tiruvannamalai Extension Farm Forestry Range.	
8	1974	Samudram	65·00	Do.	
9	1974	Melchettipattu	27·60	Chengam Farm Forestry Range	
10	1974	Manjampoondi	16·20	Do.	
11	1976	Melputhiyandal	13·00	Do.	
12	1976	Kilkachirapattu	17·00	Do.	
13	1976	Vinnamalai	17·00	Do.	
14	1976	Veraiyur	72·00	Tiruvannamalai Extension Farm Forestry Range.	
15	1976	Pavithram	50·00	Do.	
16	1976	Nallavanpalayam	37·00	Do.	
17	1976	Ottakudisal	12·00	Do.	
18	1976	Melkachirapattu	22·00	Drought prone afforestation Range	
19	1976	Andampallam	67·00	Do.	
		Total	621·18		
		(ii) KILPENNATHUR BLOCK.			
20	1964	Chellankuppam	20·20	Tiruvannamalai Range	Proposed for restocking.
21	1965	Kilpennathur	30·35	Tiruvannamalai Extension Farm Forestry Range.	Do.
22	1966	Kilpennathur	20·00	Do.	Do.
23	1973	Karikalambadi	37·00	Do.	
24	1973	Kolathur	53·00	Do.	
25	1973	Yerpakkam	20·00	Do.	
26	1973	Sanippondi	15·00	Do.	
27	1974	Somasipadi Periyeri	46·00	Do.	
28	1974	Somasipadi Chitteri	20·00	Do.	
29	1974	Sirunathur	28·00	Do.	

APPENDIX XXI B—*cont.*

STATEMENT SHOWING THE BLOCKWISE LIST OF FARM FORESTRY PLANTATIONS RAISED IN TIRUPATHUR DIVISION—*cont.*

(ii) KILPENNATHUR BLOCK—*cont.*

Serial number assigned in the map. (1)	*Year.* (2)	*Name of the plantation.* (3)	*Area in hec.* (4)	*Name of the range raised.* (5)	*Remarks.* (6)
30	1974	Kotteneri	38·00	Tiruvannamalai Extension Farm Forestry Range.	..
31	1975	Thellambadi	25·30	Do.	..
32	1975	Mekkalur	30·40	Do.	..
33	1975	Kadambai	30·20	Do.	..
34	1975	Kalpoondi	13·67	Do.	..
35	1976	Kiranur	24·00	Do.	..
36	1976	Konalur	31·00	Do.	..
37	1976	Nadalaganandal	9·00	Do.	..
38	1976	Rajanthangal	10·00	Do.	..
39	1976	Vayalur	43·00	Do.	..
40	1976	Avoor	40·00	Do.	..
41	1976	Palakkunam	27·00	Do.	..
42	1976	Kattumalaiyanur Putheri	12·00	Chengam Farm Forestry Range	..
43	1976	Kattumalaiyanur Anneri	20·00	Do.	..
44	1976	Kattumalaiyanur Manneri	29·00	Do.	
		Total ..	672·12		

(iii) THURINJAPURAM BLOCK.

Serial number assigned in the map. (1)	*Year.* (2)	*Name of the plantation.* (3)	*Area in hec.* (4)	*Name of the range raised.* (5)	*Remarks.* (6)
45	1961	Mullavady	20·20	Tiruvannamalai Range	
46	1961	Agaram sibbandi	50·00	Do.	Proposed for restocking.
47	1962	Maruthvambadi	20·20	Do.	
48	1963	Inamkariyandal	20·20	Do.	
49	1963	Usambadi	20·23	Do.	Do.
49A	1963	Selappandal	1·21	Do.	Do.
50	1964	Sorakalathur Periyeri	20·20	Do.	Do.
51	1964	Chatram	20·20	Do.	
52	1973	S. Kariyandal	12·00	Tiruvannamalai Extension Farm Forestry Range.	
53	1973	Mannai	26·00	Do.	
54	1974	Palleri	45·00	Do.	
55	1974	Vadapuludiyur	60·00	Do.	
56	1976	Porkunam	79·00	Do.	
57	1976	Sorkalathur Periyeri	80·00	Do.	
58	1976	Kamalaputhur	62·00	Do.	
59	1976	C. Andappattu	40·00	Do.	
60	1976	Narthampoondi	55·00	Do.	
		Total ..	631·44		

rial mber assigned in the Map.	Year.	Name of the plantation.	Area in hec.	Name of the Range raised.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)
		(iv) THANDARAMPET BLOCK			
61	1962	Radhapuram Periyeri	40·47	Chengam Farm Forestry Range	Proposed for restocking.
62	1963	Thandrampattu	23·07	Do.	
63	1963	Kurumanyeri	22·26	Do.	..
64	1963	Radhapuram Periyeri	18·21	Do.	Do.
65	1963	Kilravandavady	17·81	Do.	..
66	1964	Kilsiruppakkam	24·28	Do.	..
67	1964	Melsirupakkam	56·66	Do.	..
68	1968	Velur	16·19	Do.	..
69	1972	Kanakkantheri and Vodakantheri	23·00	Do.	..
70	1972	Tharadapattu	27·50	Do.	..
71	1973	Chettikuttai	23·70	Do.	..
72	1973	Tharadapattu puduyeri	26·50	Do.	..
73	1973	Kilvanakkambadi	69·00	Do.	..
74	1973	Viranam	20·00	Sathanur Range.	..
75	1974	Govindampattu	27·50	Chengam Farm Forestry Range.	..
76	1974	Melkaripur	25·10	Do.	..
77	1975	Pondai	23·20	Do.	..
78	1975	Chinniyampettai	20·20	Do.	..
79	1975	Malayanur Chekkadi	26·70	Do.	..
80	1975	Reddiyappalayam 2 bits	17·30	Do.	..
		Total ..	548·65		
		(v) CHENGAM BLOCK.			
81	1961	Valayambattu	32·37	Chengam Farm Forestry Range	..
82	1962	Kayampattu	40·47	Do.	..
83	1963	Thokkavady	60·70	Do.	..
84	1964	Kariyamangalam	64·00	Do.	..
85	1964	Varadanthangal	14·98	Do.	..
86	1965	Sorappanandal	30·35	Do.	..
87	1966	Melpunudiyur	29·95	Do.	..
88	1967	Perumattam	20·23	Do.	..
89	1968	Chengam	10·12	Do.	..
90	1969	Anwarabad	13·00	Do.	..
91	1971	Sundakkapalayam	40·47	Do.	..
92	1974	Pinjur	20·20	Do.	..
93	1974	Echimalai kuppam	31·10	Do.	..

APPENDIX XXI-B.—*cont.*

STATEMENT SHOWING THE BLOCKWISE LIST OF FARM FORESTRY PLANTATIONS RAISED IN TIRUPATHUR DIVISION—*cont.*

(*v*) Chengam Block—*cont.*

Serial number assigned in the map. (1)	*Year.* (2)	*Name of the plantation.* (3)	*Area in hec.* (4)	*Name of the range raised.* (5)	*Remarks.* (6)
94	1975	Nachipattu	28·30	Chengam Farm Forestry Range	..
95	1975	Kolanthangal	16·02	Do.	..
96	1975	Quilam	18·70	Do.	..
97	1975	Thulukkanthangal	14·60	Do.	..
98	1975	Melpennathur	28·30	Do.	..
99	1975	Sanandal	14·00	Do.	..
		Total	527·86		

(*vi*) Pudupalayam Block.

Serial number assigned in the map. (1)	*Year.* (2)	*Name of the plantation.* (3)	*Area in hec.* (4)	*Name of the range raised.* (5)	*Remarks.* (6)
100	1962	Karapattu	15·47	Changam Farm Forestry Range	25·00 Hec. restocked in 1976.
101	1963	Munnurmangalam	60·70	Do.	..
102	1964	Amanapudur	24·28	Do.	..
103	1965	Melpadur (Putheri)	20·20	Tiruvannamalai Range	..
104	1969	Kottakulam	37·23	Chengam Farm Forestry Range	..
105	1970	Kottakulam	40·00	Do.	..
106	1972	Eraiyur	46·00	Do.	..
107	1972	Melmudiyanur periyeri	23·00	Do.	..
108	1973	Melmudianur periyeri	15·60	Do.	..
109	1973	Thorappady Small Lake	25·00	Do.	..
110	1973	Thorappady Big Lake	46·00	Do	..
111	1974	Melpadur Periyeri	69.00	Do.	..
112	1975	Padiagraharam	42·00	Do.	..
113	1975	Nandimangalam	41·50	Do.	..
114	1975	Melmudiyanur Chitteri	29·60	Do.	..
115	1976	Korathampattu	25·00	Do.	..
116	1976	Karapattu	25·00	Do.	..
117	1976	Karappattu	25·00	Do.	..
118	1976	Endal	24·00	Drought prone afforestation Range.	..
119	1976	Kallarapady	27·00	Drought prone afforestation Range	..
120	1976	Mashar	60·00	Do.	..
121	1976	Nammiyandal	24·00	Do.	..
122	1976	Nayambadi	31·00	Do.	..
123	1976	Panaolaipady	68·00	Chengam Farm Forestry Range	
		Total	**844·58**		

Serial number assigned in the map. (1)	*Year.* (2)	*Name of the plantation.* (3)	*Area in hec.* (4)	*Name of the range raised.* (5)	*Remarks.* (6)
		(vii) KANDILI BLOCK			
124	1962	Koratti	60·70	Tirupathur Range	..
125	1963	Kurumberi	4·500	Do.	..
126	1965	Adaiyur	30·00	Do.	..
		Total ..	131·20		
		(viii) TIRUPATHUR BLOCK			
127	1961	Tirupathur Tank Bed	40·50	Tirupathur Range	..
128	1962	Do.	20·60	Do.	
129	1963	Do.	42·80	Do.	..
130	1963	Madapalli	40·50	Do.	..
131	1963	Anneri	21·44	Do.	..
132	1964	Agraharam	40·50	Do.	..
133	1964	Thiriyalam	25·50	Do.	..
134	1964	Muthur	10·20	Do.	..
135	1965	Achamangalam	30·40	Do.	..
			272·44		
		(ix) ALANGAYAM BLOCK			
136	1965	Govindapuram	30'40	Alangayam Range.	..
137	1966	Alangayam Bit-I	21·60	Do.	..
138	1966	Alangayam Bit-II	10·70	Do.	..
139	1967	Pakkiri Yeri	11·30	Do.	..
140	1967	Goundan Yeri	12·80	Do.	..
141	1968	Andiappanur	14·00	Do.	..
			100·80		
		(x) NATTRAMPALLI BLOCK			
142	1962	Thumberi Mitta	51·00	Alangayam Range	..
143	1963	Do.	40·00	Do.	..
			91·00		
		(xi) PERAMBATTU BLOCK			
144	1962	Elaiynagaram Mitta	72·40	Alangayam Range	..
145	1963	Do.	42·90	Do.	..
			115·30		

STATEMENT OF TOTAL AREA PLANTED UNDER FARM FORESTRY IN EACH OF THE BLOCK UPTO 1976

Serial number.	*Name of the Block.*	*Area in hectare.*	*Remarks.*
(1)	(2)	(3)	(4)
1	Tiruvannamalai Block	621·18	..
2	Kilpennathur Block	672·12	..
3	Thurinjapuram Block	631·44	..
4	Thandrampet Block	548·65	..
5	Chengam Block	527·86	..
6	Pudupalayam Block	844·58	..
7	Tirupathur Block	272·44	..
8	Nattarampalli Block	91·00	..
9	Perumbattu Block	115·30	..
10	Alangayam Block	100·80	..
11	Kandili Block	131·20	..
	Total	4,556·57	

ABSTRACT STATEMENT OF EXISTING FARM FORESTRY PLANTATIONS IN TIRUPATHUR DIVISION.

	Name of Range in which area lies.					
Year.	*Tiruvannamalai ha.*	*Sathanur ha.*	*Chengam ha.*	*Tirupathur ha.*	*Alangayam ha.*	*Total. ha.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1961	110·40	..	32·37	40·50	..	183·27
1962	40·40	40·47	559·48	81·30	123·40	341·51
1963	92·22	81·35	121·40	102·44	82·90	480·31
1964	101·00	80·94	103·26	76·20	..	361·40
1965	30·35	30·35	20·20	60·40	30·40	171·70
1966	20·00	..	29·95	..	32·30	82·25
1967	..	..	20·23	..	24·10	44·33
1968	..	16·19	10·12	..	14·00	40·31
1969	..	..	50·23	..	..	50·23
1970	..	..	40·00	..	..	40·00
1971	..	..	40·47	..	..	40·47
1972	..	50·50	69·00	..	..	119·50
1973	217·00	139·20	86·60	42·80	..	485·60
1974	345·80	52·60	120·30	..	..	518·70
1975	99·57	87·40	233·02	..	..	419·99
1976	868·00	..	309·00	..	..	11,77·00
Total	1,924·74	579·00	1,342·09	403·64	307·10	4,556·57

APPENDIX XXI-C.

LIST OF PLANTATIONS RAISED UNDER MARGINAL FORMERS AND AGRICULTURAL LABOURERS DEVELOPMENT AGENCY IN TIRUPATHUR DIVISION.

Serial number. assigned in the Map. (1)	*Year.* (2)	*Name of the plantation.* (3)	*Area in ha.* (4)	*Remarks.* (5)
		I. CHENGAM BLOCK.		
1	1974	Kolapadi S.C. Plot (Hillock)	10·00	
2	1975	Aswanageswaranai	14·00	..
3	1975	Chinnakolappadi	20·00	..
4	1975	Palaiyapattu Periyeri	18·00	..
5	1975	Palaiyapattu Chitteri	10·00	..
6	1975	Periya Kolappadi	23·00	..
7	1975	Beemanandal	25·00	..
8	1975	Kolappadi S.C. Plot (Hillock)	60·00	..
9	1976	Aswanageswaranai Aseri	15·00	..
10	1976	Perumbakkam	48·00	..
11	1976	Kannakurukka	25·00	..
12	1976	Nallur	35·00	..
13	1976	Pachal	13·00	..
		Total ..	316·00	..
		II. PUDUPALAYAM BLOCK.		
14	1975	Melnachipattu	40·00	..
15	1975	Vadamathur	33·00	..
16	1975	Sendamangalam	21·00	..
17	1975	Nathavadi	30·00	..
18	1976	Kangi	36·00	..
19	1976	Alathur	30·00	..
			190·00	
		III. THANDRAMPATTU BLOCK.		
20	1976	Kannkkalandal	23·00	..
21	1976	Nedungavadi	25·00	..
		Total ..	48·00	
		Grand total ..	554·00	

APPENDIX XXII.

DETAILED LIST OF TAMARIND PLANTATIONS RAISED UNDER M.F.P. WORKING CIRCLE TILL 1976-77 IN TIRUPATHUR DIVISION.

Serial number.	*Year.*	*Name of range.*	*Name of reserved forest and locaiity*	*Area in ha.*	*Cost of raising including maintenance upto* 1975-76.	*Condition of the plantation.*	***Remarks.***
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	1964	Sathanur	Pinjur R. F. 'B' Block.	10·12	823.46	Poor stocking.	..
2	1965	Do.	Do.	12·95	2,505·50	Very poor stocking.	..
3	1966	Do.	Do.	10·12	3,348·84	Do. ..	..
4	1967	Do.	Do.	19·42	9,362·20	25 per cent	..
5	1967	Alangayam	Inner Javadi reserved forest	2·02	281·47	Very poor stocking.	..
6	1968	Sathanur	Pinjur reserved forest 'B' Block.	10·93	3,273·10	PERCENT. 30	..
7	1969	Do.	Do.	10·52	4,782·15	30	..
8	1969	Do.	Ponnaiyar reserved forest Shorappanandal.	10·12	4,990·60	40	..
9	1970	Do.	Pinjur reserved forest ". B" Block.	10·12	3,176·50	30	..
10	1970	Do. ..	Ponnaiyar R. F, Shorappanandal.	10·12	3,346·05	40	..
11	1971	Do.	Do.	10·00	3,848·62	45	..
12	1971	Do.	Pinjur reserve forest .. "B" Block.	10·00	4087·17	40	..
13	1972	Do.	Do.	13·00	3,330·24	45	..
14	1973	Thiruvannamalai	Kannamadai reserved forest Bit I .. .. ..— Bit II .. .. ..—	 2·25 1·00	1,479·15	80	..
15	1973	Sathanur	Pinjur reserved forest "B" Block.	11·00	4,359·04	50	..
16	1973	Do. ..	Ponnaiyar reserved forest, Sorappanandal.	13·50	4,342·41	50	..
17	1974	Tiruvannamalai	Sorakolathur reserved forest.	80·00	53,180·08	30	..
18	1974	Do.	Thippakadu reserved forest	41·00	28,171·00	80	..
19	1974	Do.	Kannamadai reserved forest.	40·00	27,002·67	60	..
20	1971	Do.	Do.	20·00	14,959·32	80	..
21	1974	Sathanur	Pinjur reserved forest "B" Block.	10·50	6,754·65	60	..
22	1974	Do.	Ponnaiyar reserved forest, Shorappanandal.	22·30	8,181·95	80	.
23	1975	Do.	Ponnaiyar reserve forest, Thandrampattu.	19·10	10,277·35	20	..
24	1975	Alangayam Mangalam extension	Reserved forest.	77·00	3,097·00	60	
			Total ..	**477.09**			

APPENDIX No XXIII.

STATEMENT SHOWING THE DETAILS OF PLANTATIONS OTHER THAN THE EUCALYPTUS, BAMBOOS, SANDAL, TAMARIND AND FARM FORESTRY IN TIRUPATHUR DIVISION.

Serial number and name of range. (1)	*Year.* (2)	*Locality with reserved forest.* (3)	*Area in ha.* (4)	*Cost of raising including maintenance upto 1975-76.* (5)	*Present condition.* (6)	*Remarks.* (7)
		(I) HARDWOOD (MISCELLANEOUS)				
1 Tiruvannamalai ..	1961	Kannamadai reserved forest— Bit I	69·02	7,434·00	Failure	..
		Bit II	42·09			
2 Do.	1961	Tippakadu reserved forest ..	48·56	10,822·00	Do.	..
3 Do.	1961	Annamalai reserved forest ..	60·77	9,980·00	Do.	..
4 Do.	1961	Eraiyurmalai reserved forest ..	59·08	8,782·00	Do.	..
5 Sathanur	1961	Radhapuram reserved forest ..	208·82	19,296·03	Do.	In 1974, Eucalyptus /was sold. Revenue realised Rs. 10 only.
6 Do.	1961	Poomalai reserved forest ..	168·35	11,562·20	Do.	..
7 Do.	1961	Ponniar reserved forest, (Thandrampattu).	8·04	675·00	Do.	
8 Chengam	1961	Munnurmangalam reserved forest— A Block	129·50	8,072·86	Do.	..
9 Do.	1961	B. Block	22·26	862·70	Do.	..
10 Alangayam	1961	Vellakuttai reserved forest ..	167·54	4,213·54	Do.	..
11 Tiruvannamalai	1962	Sorakalathur reserved forest ..	95·51	15,809·00	Do.	..
12 Do.	1962	Kavuthimalai reserved forest ..	73·65	9,237·00	Do.	
13 Do.	1962	Do.	58·27			..
14 Do.	1962	Kannamadai reserved forest ..	87·00	13,155·00	Do.	..
15 Do.	1962	Eraiyurmalai reserved forest ..	53·00	12,833·00	Do.	
		Do.	44·53			..
16 Sathanur	1962	Pinjur reserved forest A Block ..	40·47	16,176·35	Do.	..
17 Do.	1962	Radhapuram reserved forest.	84·98	11,314·01	Do.	In 1974 Eucaluptus was sold. Revenue realised Rs. 200 only.
18 Do.	1962	Poomalai reserved forest ..	28·33	5,249·02	Do.	..
19 Alangayam	1962	Nekkanamalai reserved land ..	131·12	10,662·39	Do.	..
20 Tiruvannamalai	1963	Sorakalathur reserved forest ..	9·17	5,492·75	Do.	..
21 Do.	1963	Kannamadai reserved forest ..	18·21	2,165·16	Do.	..
22 Do.	1963	Thippakadu reserved forest ..	20·23	9,466·52	Do.	..
23 Do.	1963	Karuthimalai reserved forest ..	16·19	7,858·23	Do.	..
24 Do.	1963	Uchimalai reserved forest ..	20·23	9,600·72	Do.	In 1973 Eucalyptus was sold. Revenue realised Rs. 1,392.
25 Sathanur	1963	Poomalai reserved forest ..	34·80	12,112·76	10%	..
26 Do.	1963	Pinjur reserved forest A. Block ..	54·23	16,176·35	10%	In 1973, Eucalyptus was sold. Revenue realised Rs. 868·00.

Serial number and name of range.	Year.	Locality with reserved forest.	Area in ha.	Cost of raising including-maintenance upto 1975-76.	Present condition.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
27 Sathanur	1963	Radhapuram reserved forest ..	41.68	13,173·90	10 per cent.	In 1974 Eucalyptus was sold. Revenue realised Rs. 740.
28 Alangayam	1963	Alangayam reserved forest ..	121·41	12,298·80	Failure.	..
29 Tiruvannamalai	1963	Sorakalathur reserved forest ..	10·12	4,350·70	Do.	..
30 Do. ..	1964	Tippakadu reserved forest	25·00	5,308·39	Do.	..
31 Sathanur	1964	Poomalai reserved forest ..	24·28	8,541·33	Do.	..
32 Do.	1964	Pinjur reserved forest A. Block.	29·95	1,355·10	Do.	..
33 Do.	1964	Radhapuram reserved forest ..	27·11	12,192·74	Do.	..
34 Alangayam	1964	Alangayam reserved forest ..	80·94	17,304·31	Do.	..
35 Sathanur	1965	Poomalai reserved forest ..	21·85	3,909·27	Do.	..
36 Do.	1965	Radhapuram reserved forest ..	27·92	5,958·65	Do.	..
37 Do.	1965	Pinjur, A Block	31·97	6,692·87	Do	..
38 Alangayam	1965	Alangayam reserved forest ..	60·75	15,165·51	Do.	..
39 Sathanur	1966	Poomalai reserved forest ..	6·07	2,168·50	Do.	..
40 Do.	1965	Pinjur reserved forest, A block	6·00	2,800·00	Do.	..
41 Do.	1965	Radhapuram reserved forest ..	5·07	2,307·75	Do.	..
42 Do.	1967	Poomalai reserved forest ..	10·11	3,644·24	Do.	..
43 Do.	1967	Pinjur reserved forest, A Block.	20·23	4,598·56	Do.	..
44 Do.	1967	Radhapuram reserved forest ..	1 0·52	3,699·41	Do.	..
45 Do.	1968	Pinjur reserved forest A Block	14·97	6,810·25	Do	..
					PER CENT.	
46 Tiruvannamalai	1975	Sorakolalathur reserved forest— Bit I .. .. .. Bit II	62·60 18·80	69,088·35	70	..
47 Do.	1975	Tippakkadu reserved forest ..	40·00	38,842·75	90	..
47A Do.	1975	Tippakkadu reserved forest ..	40·50	33,461·44		..
48 Do. ..	1975	Eraiyurmalai reserved forest	45·00	33461·44	85	
49 Do.	1975	Do.	20·00	21,936·96	90	..
50 Do.	1975	Kannamadai reserved forest ..	40·00	37,738·88	85	..
51 Do.	1975	Annamalai reserved forest ..	17·00	17,395·20	90	..
52 Sathanur	1975	Ponniar reserved forest Sorappanandal.	19·80	14,482·40	85	..
53 Do.	1975	Ponniar reserved forest, Thandrampet.	20·00	14,743·05	85	..
54 Do.	1975	Radhapuram reserved forest ..	36·00	27,010·28	85	..
55 Do.	1975	Pinjur reserve forest, 'C' Block.	53·20	36,906·50	75	..
56 Do.	1975	Pinjur 'B' Block	10·20	7,956·60	80	..
57 Chengam	1975	Mudanai reserved forest (East)	30·60	22,349·22	80	..
58 Do. . ..	1975	Mudanai reserved forest (West)	30·25	22,240·11	80	.

Serial number and name of Range. (1)		*Year.* (2)	*Locality with RF.* (3)	*Area in ha.* (4)	*Cost of raising including maintenance.* (5)	*Present condition.* (6)	*Remarks.* (7)

1. *Hardwood (Miscellaneous)*—cont.

						PER CENT.	
59	Chengam	1975	Ravandavady RF	6·00	8,621·31	80	....
60	Do. . ..	1975	Munnurmangalam A Block ..	33·88	24,578·04	80	....
61	Do.	1975	Ravandavadi RF	20·00	17,928·19	85	....
62	Tiruvannamalai.. ..	1976	Tippakadu RF	40·00	3,407·40	95	....
63	Do.	1976	Do.	40·00	20,799·03	90	....
64	Do.	1976	Sorakalathur R.F. Bit I .. Sorakalathur R.F. Bit II ..	60·00 25·00	12,548·00	90	....
65	Do.	1976	Kannamadai R.F.	40·00	2,932·20	95	....
66	Do.	1976	Eraiyurmalai R.F. ..	60·00	36,341·15	95	....
67	Do.	1976	Do. ..	40·00	6,399·00	90	....
68	Do.	1976	Annamalai RF	34·00	17,395·20	90	....
69	Sathanur	1976	Radhapuram RF	70·00	38,804·25	90	....
70	Do.	1976	Do. ..	25·00	4,893·90	90	....
71	Do.	1976	Pinjur RF C Block ..	50·00	9,384·00	80	....
72	Do.	1976	Ponniar RF—Sorapanandal ..	25·00	4,983·90	90	....
73	Chengam	1976	Munnurmangalam A block ..	50·00	8,651·80	80	....
74	Do.	1976	Ravandavadi RF	25·00	2,844·50	90	....
75	Do.	1976	Do. ..	20·00	10,306·55	80	....
76	Do.	1976	Mudanai RF—East Bit I .. Mudanai RF—East Bit II ..	33·00 21·00	3,863·00	90	Bit II part in Damarakadu RF.
77	Do. ..	1976	Mudanai RF—West Bit I .. Mudanai RF—West Bit II ..	42·00 33·50	5,927·75	90	....

2. SOFTWOOD (AILANTHUS EXCELSA).

1	Chengam	1961	Pelamarathur RF ..	0·40	205·81	10	....
2	Alangayam	1961	Narasingapuram RF ..	2·02	439·97	Failure	....
3	Do.	1961	Inner Javadi RF	0·81	418·68	Do.	....
4	Chengam	1962	Palamarathur RF ..	2·02	495·00	10	....
5	Alangayam	1962	Narasingapuram RF	2·02	626·91	Failure	....
6	Do. ..	1962	Inner Javadi RF	2·43	705·16	Do.	....
7	Chengam	1963	Pelamarathur RF	2·02	483·01	10	....

Serial number name of Range. (1)	*Year.* (2)	*Locality with RF.* (3)	*Area in ha.* (4)	*Cost of raising including maintenance.* (5)	*Present condition.* (6)	*Remarks.* (7)
		3. TEAK.				
1 Chengam	1940	Tenmalai RF Near Melpet	0·40	Not available.	20	....
2 Do.	1941	Do.	0·40	Do.	20	....
3 Do.	1959	Pelamarathur RF	2·02	260·25	20	....
4 Do.	1960	Do.	2·02	60·00	25	....
5 Do.	1961	Do.	2·02	285·00	25	....
6 Alangayam	1961	Nagaluthu RF	2·02	141·86	Failure	....
7 Chengam	1969	Pelamarathur RF	6·07	649·80	40	....
		4. ACACIA CONCINNA.				
1 Chengam	1966	Tenmalai RF	2·83	480·07	Failure	....
2 Alangayam	1966	Inner Javadi RF	5·26	547·30	Do.	....
3 Chengam	1967	Tenmalai RF	4·05	641·75	Do.	....
		5. DIVI DIVI.				
1 Chengam	1976	Ravandavadi RF	1·00	..	75	....

APPENDIX XXIV.

STATEMENT SHOWING THE SCHOOLS RUN BY THE FOREST DEPARTMENT IN TIRUPATHUR DIVISION.

Serial number and name of school and village.	*Year of starting.*	*Number of standards available.*	*Strength.*			*Total.*	*Remarks.*
			Staff.	*Boys.*	*Girls.*		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
I. Tiruvannamalai Range—Nil.							
II. Sathanur Range—Nil.							
III. Chengam Range—							
1 Elementary School at Valakadu.	1957	I to V	1	32	8	40	....
2 Elementary School at Puliyur	Not available.	I to V	1	39	11	50	....
3 Elementary School at Melpet	1974	I to V	1	39	13	52	....
4 Elementary School at Kalyanamandai.	1971	I to V	1	42	8	50	....
IV. Tirupathur Range—							
5 Elementary School at Thagarakuppam.	1960	I to V	1	32	19	51	....
6 Elementary School at Nellivasal	1947	I to V	2	58	28	86	....
7 Elementary School at Perumpalli.	1947	I to V	1	43	16	59	....
8 Elementary School at pudur	1946	I to V	..	..	..	..	This school is shifted to the higher Elementary school at Pudur which had only VI to VIII standards previously and now it is functioning with I to VIII standards.
9 Higher Elementary School at Pudur.	1961	I to VIII	3	242	51	293	....
Y. *Alangayam*—Nil.							
Total ..			11	527	154	681	

APPENDIX XXV.

STATEMENT SHOWING THE LIST OF ROADS AND CART TRACTS MAINTAINED BY THE FOREST.

DEPARTMENT IN TITRUPATHUR DIVISION

Serial number and name of Roads (or) Cart Tracts.	Year of construction.	Capital Costs.	Length.				Cost of Annual repiars.			Remarks.
			Within the RF (KM)	Outside the RF (KM)	Total length (KM)	Metalled or not in Km.	1972–73	1973–74	1974–75	
(1)	(2)	(3) RS. P.	(4)	(5)	(6)	(7)	(8) RS. P.	(9) RS. P.	(10) RS. P.	(11)
Tiruvannamlai Range—Nil										
Sathanur Range—										
1 Thanipady-Ulchekkadi Road ..	1963–64	30,324·86	..	6·90	6·90	Not metalled	..	Not maintained.	..	....
Chengam Range.										
2 Approach road to Paramanandal inspection shed.	1929–30	88·81	0·73	..	0·73	Do.	..	Not maintained.	..	....
3 Athipet—Kuttathur Road	1936–37	2,922·00	..	7·44	7·44	Do.	1,440 00	1,440 00	1,564 00	....
4 Melpet—Paramanandal Bridle Path..	Not known	8,400·00	11·27	..	11·27	Do.	..	Not maintained.	..	....
5 Kuttathur—Puliyur Road	1941–43	7,193·00	5·13	4·46	9·59	Do.	2,880 00	2,880 00	3,128 00	....
6 Puliyur—Melpet Road..	1960–61	21,713·37	7·25	..	7·25	Do.	1,438 05	1,440 00	1,564 00	....
7 Paramanandal—Melpet Road ..	1975–76	504,022·76	14·30	..	14·30	Do.	..	..	..	....
8 Athipet—Melpet Road	1974–75	Not furnished.	25·00	..	25·00	Do.	..	Not mentained.	..	....
9 Formation of Jeep track to the Police Radio Station from Melpet.	1973–74	1,465·30	0·54	..	0·54	Do.	..	Do.	..	....
Tirupathur Range.										
10 Andiappanur—Singarapet Road (via) Pudur.	1910–11	23,442·00	17·10	42·85	59·95	..	15,754 00	14,246 81	16,337 65	....
					50·29 9·66	Not metalled. Metalled.				
11 Malayandipatti—Nellivasal Bungalow Road.	1953	9,998·00	2·42	..	2·42	Not metalled	Expenditure included in Singarapet—Pudur Road.			
12 Nellivasal—Nellipattu Road	1961–62 and 1963.	51,923·76	..	3·82	3·82	Do.	1,440 00	1,320 00	1,530 00	....
Alangayam Range.										
13 Gillman Road (Alangayam to Komattiyur.)	1918–19	1,26,769·00	8·85	7·65	16·50	Metalled.	18,923 85	15,301 70	17,551 40	....
14 Kavalur—Mandarakuttai Road ..	1924–25	169·00	5·22	..	5·22	Not Metalled.	1,436 00	1,440 00	1,584 00	....
15 Kavalur—Vasanthapuram Road upto junction of Andippanur Road.	1931–32	2,151·00	11·47	..	11·47	Do.	2,870 20	2,880 00	3,280 50	....

APPENDIX XXVI-A.

STATEMENT SHOWING THE LIST OF BUILDINGS MAINTAINED BY THE FOREST DEPARTMENT IN TIRUPATHUR DIVISION.

Serial number and Name of Range.	*Name of Building.*	*Locality.*	*Year of construction and year of carrying out improvement.*	*Amount of construction and improvement.*	*Beat.*	*Section.*	*For whom constructed.*	***Remarks.***
(1)	(2)	3)	4)	(5)	(6)	(7)	(8)	(9)
				RS. P.				
I. Tiruvannamalai—								
1	Range Office	Tiruvannamalai	1909	9,518·00	Sorakalthur	Tiruvannamalai	Range Office	Electrified 1968–69.
2	Range Officer's quarters	Do.	1913	1,562·00	Do.	Do.	Range Officer	Electrified 1965–66.
3	Range clerk quarters	Do.	1911	1,722·00	Do.	Do.	Range clerk	Electrified 1968–69.
4	Lavatory	Do.	1939	39·00	Do.	Do.	Range Officer	....
5	Subordinate quarters	Velandal	1961	6,999·26	Kilnathur	Thippakadu	Forest Guard and Forest watcher.	....
6	Single Forester quarters.	Tiruvannamalai	1965	7,965·17	Sorakolathur	Tiruvannamalai	Forester	....
II. Sathanur.								
7	Range Officer quarters and Range Office.	Sathanur Dam	1958	13,106·00	Sathanur	Sathanur	Range Officer and Range Officer	Previously section Officer's quarters of P.W.D.
8	Range clerks quarters	Do.	1958	13,764·00	Do.	Do.	Range clerks and Forester.	....
9	Subordinate quarters	Do.	1958	10,417·00	Do.	Do.	Forest Guard and Forest Watcher.	....
10	Peon Quarters	Do.	1958	3,176·00	Do.	Do.	Office Peon and Office Watcher.	....
11	Mission hut (Store Room).	Do.	1958	1,335·00	Do.	Do.	Store Room	....
12	Subordinate quarters	Aryakunjur	1911	486·00	Sorapanandal	Sorapanandal	Forest Guard and Forest Watcher.	Not used.
13	Do.	Athipadi	1911	477·00	Athipadi	Thanipadi	Do.	Do.
14	Do.	Royandapuram (Navakollai).	1911	914·00	Perungulathur	Thanipadi	Do.	Do.
15	se	Thanipadi	1913	3,583·00	Thanipadi	Thanipadi	Inspecting Officer	Special repairs and electrified during 1966–67.

16	Rest House	Bheemarapatty	1919	2,250·00	Bheemarapatty	Thanipadi	Inspecting Officer	Converted as residential building.
17	Do.	Sathanur Dam	1958	8,408·00	Sathanur	Sathanur	Camping Officer	Previously AE's quarters.
18	Subordinate Quarters.	Porasapattu	1960	6,505·42	Thalayuthu	Arattavadi	Forest Guard Watcher.	....
19	Do.	Thanipadi	1961	6,737·31	Thanipadi	Thanipadi	Do.	....
20	Clerks Quarters	Sathanur Dam	1971	4,445·00	Sathanur	Sathanur	Junior Assistant	Purchased from P.W.D.

III. Chengam Range—

21	Rest House with out-house.	Melpet	1896	1,015·00	Nellivoy series	Melpet	Inspecting Officer	....
22	Subordinate Quarters.	Pudupalyam	1915	2,262·00	Dhamaraikadu	Pudupalayam	Forest Guard and Watcher.	....
23	Rest House with out-house.	Kuttathur	1917	3,533·00	Kuttathur	Kuttathur	Inspecting Officer	....
24	Subordinate Quarters.	Kuttathur	1919	2,224·00	Kuttathur	Kuttathur	Forester.	....
25	Do.	Melpet	1928	2,104·00	Melpet	Melpet	Forester and Forest Guard	....
26	Do.	Paramanandal	1928	292·00	Cheyyar	Cheyyar	Forester and Forest Guard.	....
27	School Shed	Kuttathur	1946	80·00	Puliyur	Melpet	School	....
28	Do.	Puliyur	1947	166·00	Puliyur	Melpet	School	....
29	Teacher's Shed	Puliyur	1947	100·00	Puliyur	Melpet	Teacher	....
30	School Shed	Perumattam	1947	177·00	Nellivoy	Melpet	School	....
31	Teacher shed	Perumattam	1947	100·00	Nellivoy	Melpet	Teacher	....
32	Subordinate Quarters.	Paramanandal	1960	6,888·00	Cheyyar	Cheyyar	Forest Guard, Watcher	....
33	Do.	Kuttathur	1960	7,046·00	Kuttathur	Kuttathur series.	Forest Guard	....
34	Do.	Kuppanatham	1960	5,335·52	Oorgoundanoor	Cheyyar	Forest Guard	....
35	Do.	Muthanur	1961	7,130·00	Muthanur	Cheyyar	Forest Guard and Watcher.	....
36	Do.	Dandampet	1961	6,803·20	Anandavady	Ravandavady	Do.	....
37	Do.	Melravandavady.	1961	6,865·78	Ravandavady	Ravandavady	Do.	....
38	Double Forester's Quarters.	Paramanandal.	1965	12,464·15	Paramanandal	Paramanandal and Cheyyar.	Foresters	....

Serial number and name of Range.	Name of Building.	Locality.	Year of construction and year of carrying out improvement.	Amount of construction and improvement.		Beat.	Section.	For whom constructed.	Rem
(1)	(2)	(3)	(4)	(5)		(6)	(7)	(8)	(9)
				RS.	P.				
IV. Tirupathur—									
39	Singarapet Rest House with out-house.	Singarapet	1910	3,874	59	Singarapet	Singarapet	Inspecting Officer	Electrified.
40	Pudur Rest House with out-house.	Pudur	1919	2,414	00	Mottur	Matrapalli	Inspecting Officer	....
41	Nellivasal Rest House with out-House.	Nellivasal	1935	7,668	98	Singarapet	Singarapet	Do.	Electrified.
42	Thagarakuppam Inspection Shed.	Thagarakuppam	1945	1,739	00	Thagarakuppam.	Paramanandal	Do.	Converted into residential building
43	Subordinate Quarters.	Chennasamudram.	1958	8,003	00	Chennasamudram.	Paramanandal	Forest Guard, Watcher.	....
44	Do.	Nellivasal	1922	3,584	00	Singarapet	Singarapet	Do.	Electrified.
45	School Shed	Perumpalli	1947	235	00	Thagarakuppam.	Paramanandal	School	....
46	Teacher's Shed	Perumpalli	1947	150	00	Thagarakuppam	Paramanandal	Teacher	....
47	School Shed	Nellivasal	1947	763	60	Singarapet	Singarapet	School	....
48	Teacher's Shed	Nellivasal	1947	550	00	Singarapet	Singarapet	Teacher	....
49	School Shed	Pudur	1946	80	00	Mottur	Matrapalli	School	....
50	Teacher's Shed	Pudur	1946	50	00	Mottur	Matrapalli	Teacher	....
51	Subordinate Quarters	Kuppanatham	1960	7,202	64	Thagarakuppam	Paramanandal	Forest Guard, Watcher.	....
52	Subordinate Quarters.	Dandampattu	1960	6,861	66	Kuppanatham	Singarapet	Do.	....
53	Do.	Singarapet	1961	6,379	06	Singarapet	Singarapet	Do.	Electrified.
54	Tanah Shed	Singarapet	1959	500	00	Singarapet	Singarapet	Tanahdar	....
55	District Forest Office.	Tirupathur	1896	13,045	00	Mottur	Matrapalli	D.F.O's Office	Electrified.
56	Sandalwood Depot	Tirupathur	1909	52,509	33	Mottur	Matrapalli	Sandalwood Godwn.	Do.
57	Additional Storage Shed.	Tirupathur	1957	13,693	00	Mottur	Matrapalli	Do.	Do.
58	Mazdoors Shed	Tirupathur	1961	3,589	61	Mottur	Matrapalli	Depot Watcher	....
59	Subordinates Quarters.	Tirupathur	1961	8,158	31	Mottur	Matrapalli	Fort Guard, Watcher.	Do.

60	Subordinate Quarters.	Andiappanur	1961	8,272	00	Andiappanur	Andiappanur	Forest Guard, Watcher	Electrified.
61	Additional Sandal storage shed.	Tirupathur	1963	18,158	03	Mottur	Matrapalli	Storage Shed	Do.
62	Single Foresters' Quarters.	Andiappanur	1964	6,724	00	Andiappanur	Andiappanur	Forester	Electrified.
63	Double Foresters Quarters.	Tirupathur	1964	16,256	33	Mottur	Matrapalli	Head Clerk, Accountant.	Do.
64	Combined Subordinates Quarters.	Do.	1965	11,933	72	Mottur	Matrapalli	Office Staffs.	Do.
65	Range Officers Quarters	Do.	1965	16,612	00	Mottur	Matrapalli	Range Officer	Do.
66	Single Forester's Quarters.	Singarapet	1965	8,517	51	Singarapet	Singarapet	Forester	Do.
67	Double Foresters Quarters.	Tirupathur	1965	18,546	39	Mottur	Matrapalli	Assistants of D.F.O's. Office.	Do.
68	Do.	Do.	1966	18,718	25	Do.	Do.	Do.	Do.
69	Additional Double Lock Godown East Wing.	Do.	1971	25,135	00	Do.	Do.	Sandalwood Godown.	....
70	Additional Double Lock Godown West Wing.	Do.	1971	22,516	00	Do.	Do.	Do.	....
				RS.	P.				
71	Double Forester's Quarters.	Tirupathur	1971	21,602	00	Mottur	Matrapalli	Assistant, Draftsman.	Electrified.
72	Range Office	Tirupathur	1975	32,814	97	Mottur	Do.	Range Officer	Do.
73	Single,Junior Assistant Quarters.	Do.	1975	15,963·56		Do.	Do.	Junior Assistant	Do.
V. Alangayam—									
74	Rest Hosue with out houses.	Kottur	1908	1,994	00	Nagaluthu	Kottur	Camping Officer	....
75	Rest Hosue with out-houses.	Kavalur	1918	7,837	00	Naickanur	Kavalur	Do.	Remodified during 1975–76.
76	Range Office	Alangayam	1924	2,280	00	Alangayam	Alangayam	Range Office	....
77	Range Officers Quarters with outhouse.	Alangayam	1829	4,908	40	Alangayam	Alangayam	Range Officer	....

Serial number and name of Range.	Name of Building.	Locality.	Year of construction and year of carrying out improvement.	Amount of construction and improvement.	Beat.	Section.	For whom constructed.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
				RS. P.				
78	Range Clerks Quarters,	Alangayam ..	1934	1,342 00	Alangayam ..	Alangayam ..	Range Clerk	....
79	Subordinates Quarters,	Kottur	1910	1,014 00	Nagaluthu ..	Kottur	Forester, Guard, Watcher.	Not electrified. The quarters are very poor condition
80	Subordinate Quarters,	Mittur	1913	348 00	Mangalam ..	Kottur	Guard, Watcher ..	....
81	Foresters Quarters ..	Kavalur	1927	1,668 00	Naickanur ..	Kavalur	Forester	....
82	Subordinate Quarters.	Do. ..	1928	2,718 00	Do. ..	Do. ..	Guard, Watcher ..	....
83	Do.	Alangayam ..	1960	6,442 42	Alangayam ..	Alangayam ..	Do. ..	....
84	Do.	Alangayam ..	1961	6,533 00	Badakuppam ..	Do. ..	Do. ..	....
85	Do.	Poongulam ..	1964	7,745 00	Poongulam ..	Kavalur	Do. ..	....
86	Tanah shed	Alangayam ..	1959	130 00	Alangayam ..	Alangayam ..	Tanahdars.	....
87	Peon Quarters ..	Do. ..	1971	5,510 00	Do. ..	Do. ..	Peon	....
88	Foresters' Quarters ..	Do. ..	1971	9,660 96	Do. ..	Do. ..	Forester	....

APPENDIX XXVI 'B'.

STATEMENT SHOWING THE LIST OF BUILDINGS WRITTEN OFF AND DISMANTLED IN TIRUPATHUR DIVISION.

Seril number and name of building. (1)	*Year of construction.* (2)	*Cost.* (3)	***Remarks.*** (4)
Tiruvannamalai Range.			
1 Out-house at Tiruvannamalai	..	152·00	Dismantled.
2 Tanahshed at Kilpennathur	1954	483·00	Dismantled D.F.O. D.S.O. No. 25/70-71 dated 9th December 1970.
3 Tanahshed at Veraiyur	..	486·00	Dismantled.
Sathanur Range.			
4 Pudur Chekkadi Rest House	1928	860·00	Dismantled in D.F.O. D.S.O No. 18/65-66, dated 3rd February 1966.
Chengam Range.			
5 Teachers shed at Kuttathur	..	80·00	Dismantled.
6 Inspection shed at Paramanandal	1927	1,097·00	Dismantled in D.F.O. D.S.O.No.25/67-68, dated 31st October 1967.
7 Inspection shed converted as Forester quarters at Puliyur	1919	1,352·00	Dismantled in D.F.O. D.S.O.No. 17/73-74, dated 1st October 1973.
Tirupathur Range.			
8 Kambugudi rest house with outhouse	1901	2,398·55	Written off in D.F.O. D.S.O. No. 23/67-68, dated 31st October 1967.
9 Outhouse at Andiappanur	1907	187·00	Written off in D.F.O. D.S.O. No. 28/66-67, dated 15th December 1966, in C. No. 32186/66/D2, dated 6th December 1966.
10 Chinnasamudram Rest House with outhouse	1939	1,800·00	Written off in D.F.O. D.S.O. No. 24/67-68, dated 31st October 1967.
11 Subordinate quarters at Pudur	1924	738·00	Written off in D.F.O. D.S.O. No. 3/68-69, dated 7th May 1968.
Alangayam Range	Nil.		

APPENDIX XXVII.

STATEMENT SHOWING THE ANNUAL YIELD OF SANDALWOOD (HEARDWOOD) FOR THE YEAR 1960–61 TO 1957–76.

Name of Range.	*Name of series.*	1960–61			
		Coupe No.	*Extent.*	*Trees.*	*Yield.*
(1)	(2)	(3)	(4)	(5)	(6)
			HA.		TONNES.
I. Tirupathur Range	1. Singarapet	..	..	..	..
	2. Puliyur	III	697·27	363	19·912
	3. Mambakkam	III	341·56	2,607	149·010
	4. Mottur	..	..	..	..
	5. Nadukuppam	..	..	..	..
	6. Thagarakuppam	..	..	..	..
	7. Andiappanur	..	..	..	..
	8. Rajapalayam	..	..	..	..
	9. Pudur unreserve	III	483·19	480	36·579
	10. Kambugudi unreserve	III	341·56	2,546	206·491
	11. Pudur V.F.S.	..	1,537·81	840	47·820
	12. Puliyur V.F.S.	..	1,780·61	814	55·438
	13. Kambugudi	..	1,537·81	199	9·362
	Range total			7,849	524·612
II. Alangayam Range	1. Vasanthapuram	III	294·61	787	7·633
	2. Kottur	..	..	..	..
	3. Athanavur	..	..	..	..
	4. Yelagiri V.F.S.	..	1,934·39	7	0·600
	Range total			794	8·233
III. Chengam Range	1. Koottathur	..	..	..	..
	2. Thalur	..	..	..	..
	3. Perumattam	..	..	..	..
	4. Melpet	VI	275·19	1,575	132·371
	5. Athipattu	..	..	..	....
	6. Nellivoy	III	246·86	1,969	285·932
	7. Nallpatttu	..		..	..
	8. Pelamarathur	..	2,352·44	442	21·013
	9. Melpet V.F.S.	..	1,025·47	404	30·679
	10. Nellivoy V.F.S.	..	462·15	641	84·094
	11. Pelamarathur	III	292·59	136	3·272
	Range total	..	..	5,167	557·361
	Division total	..		13,810	1,090·206

APPENDIX XXVII—*cont.*

STATEMENT SHOWING THE ANNUAL YIELD OF SANDALWOOD (HEARDWOOD) FROM THE DIFFERENT COUPES OF TIRUPATHUR DIVISION FROM THE YEAR 1960–61 TO 1975–76—*cont.*

Name of Range.	*Name of series.*	1961–62			
		Coupe number.	*Extent.*	*Trees.*	*Yield.*
(1)	(2)	(7)	(8)	(9)	(10)
			HA.		TONS.
I. Tirupathur Range	1. Singarapet	..	..	..	..
	2. Puliyur	IV	537·23	661	23·733
	3. Mambakkam	IV	234·72	656	41·104
	4. Mottur	..	..	..	..
	5. Nadukuppam	..	..	..	..
	6. Thagarakuppam	..	..	..	..
	7. Andiappanur	..	..	..	..
	8. Rajapalayam	..	..	..	..
	9. Pudur unreserve	IV	381·67	1,751	38·238
	10. Kambukudi unreserve ..	IV	144·07	83	0·767
	11. Pudur VFS.	..	1,537·81	790	45·290
	12. Puliyur VFS	..	1,780·61	525	110·657
	13. Kambugudi	..	1,537·81	283	12·544
	Range total			4,749	272·333
II. Alangayam Range	1. Vasanthapuram	IV	408·73	280	2·27
	2. Kottur	..	..	..	..
	3. Athanavur	..	..	..	..
	4. Yelagiri V.F.S.	..	1,934·39	57	0·461
	Range total			337	2·736
III. Chengam Range	1. Koottathur	..	..	..	..
	2. Thalur	..	..	..	..
	3. Perumattam	..	..	..	..
	4. Melpet	I	406·30	2,837	296·351
	5. Athipattu	..	..	..	..
	6. Nellovoy	IV	231·48	1,165	100·018
	7. Nallapattu	..	..	..	..
	8. Pelamarathur	..	2,352·44	294	10·015
	9. Melpet V.F.S.	..	1,025·47	864	78·899
	10. Nellivoy V.F.S.	..	462·15	1,207	142·370
	11. Pelamarathur	IV	458·91	324	10·847
	Range Total ..			6,691	638·500
	Division Total ..			11,777	913·569

APPENDIX XXVII—*cont.*

STATEMENT SHOWING THE ANNUAL YIELD OF SANDALWOOD (HEARDWOOD) FROM THE DIFFERENT COUPES OF TIRUPATHUR DIVISION FROM THE YEAR 1960–61 TO 1975–76.

Name of Range.	*Name of series.*	1962–63			
		Coupe number.	*Extent.*	*Trees.*	*Yield.*
(1)	(2)	(11)	(12)	(13)	(14)
			HA		TON.
I. Tirupathur Range	1. Singarapet	..	..	..	..
	2. Puliyur	V	601·77	2 328	135·952
	3. Mambakkam	V	337·51	553	24·619
	4. Mottur	..	..	..	..
	5. Nadukuppam	..	..	..	..
	6. Thagarakuppam	..	..	..	..
	7. Andiappanur	..	..	..	..
	8. Rajapalayam	..	..	..	..
	9. Pudur unreserve	V	191·82	748	21·565
	10 Kambugudi unreserve	V	267·09	192	6·773
	11. Pudur VFS	..	1,537·81	908	58·374
	12 Puliyur V.F.S.	..	1,780·61	459	32·780
	13. Kambugudi	..	1,537·81	262	14·597
	Range Total ..			5,450	294·660
II. Alangayam Range	1. Vasanthapuram	V	501·81	534	16·790
	2. Kottur	III	536·21	7	0·020
	3. Athanavur	..	..	..	..
	4. Yelagiri V.F.S.	..	1,934·39	20	0·187
	Range Total ..			561	16·997
III. Chengam **Range**	1. Koottathur	..	..	..	..
	2. Thalur	..	..	..	..
	3. Perumattam	..	..	..	..
	4. Melpet	I	325·77	4,770	495·514
	5. Athipattu	..	..	..	..
	6. Nellivoy	V	259·81	1,980	270·868
	7. Nallapattu	..	..	..	..
	8. Pelamarathur	..	2,352·44	154	11·120
	9. Melpet V.F.S.	..	1,025·47	527	47·358
	10. Nellivoy V.F.S.	..	462·15	506	67·532
	11. Pelamarathur	V	242·87	1,395	64·118
	Range Total ..			9,332	956·510
	Division Total ..			15,343	1,268·167

APPENDIX XXVII—*cont*.

STATEMENT SHOWING THE ANNUAL YIELD OF SANDALWOOD (HEARDWOOD) FROM THE DIFFERENT COUPES OF TIRUPATHUR, DIVISION FROM THE YEAR 1960–61 TO 1975–76

Name of Range.	*Name of series.*	1963–64			
		Coupe number.	*Extent.*	*Trees.*	*Yield.*
(1)	(2)	(15)	(16)	(17)	(18)
			HA		(TONNES.)
Tirupathur Range	1 Singarapet	..	..	..	..
	2. Puliyur	VI	630·50	723	23·954
	3. Mambakkam	VI	350·86	446	7·226
	4. Mottur	..	..	..	..
	5. Nadukuppam	..	..	..	..
	6. Thagarakappam	..	..	..	..
	7. Andiappanur	..	..	..	..
	8. Rajapalayam	..	..	..	..
	9. Pudur unreserved	VI	381·67	239	6·468
	10. Kambugudi unreserved	VI	196·68	82	0·710
	11. Pudur V. F. S.	..	1,537·81	180	9·489
	12. Puliyur V. F. S.	..	1,780·61	306	35·764
	13. Kambugudi	..	1,537·81	180	9·489
	Range Total ..			2,156	93·100
II. Alangayam Range	1. Vasanthapuram	VI	787·92	24	0·197
	2. Kottur	..	..	..	..
	3. Athanavur	..	..	..	..
	4. Yelagiri V. F. S.	..	1,934·39	18	0·084
	Range Total ..			42	0·281
II. Chengam Range	1. Koottathur	..	..	..	..
	2. Thalur	..	..	..	..
	3. Perumattam	..	..	..	..
	4. Melpet	III	352·08	3,517	325·522
	5. Athipattu	..	..	..	..
	6. Nellivoy	VI	227·84	2,273	249·478
	7. Nallapattu	..	..	..	..
	8. Pelamarathur	..	2,352·44	227	12·261
	9. Melpet V. F. S.	..	1,025·47	198	15·620
	10. Nellivoy V.F. S.	..	462·15	563	76·133
	11. Pelamarathur	VI	248·88	26	0·906
	Range Total ..			6,804	679·920
	Division Total ..			9,002	773·301

Name of Range.	*Name of series.*	1964-65			
		Coupe number.	*Extent.*	*Trees.*	*Yield.*
(1)	(2)	(19)	(20)	(21)	(22)
			(HA.)		(TONNES.)
I. Tirupathur Range	1. Singarapet	I	1,339·51	605	41·770
	2. Puliyur	I	1,556·42	75	1·453
	3. Mambakkam	I	726·00	204	17·865
	4. Mottur	I	953·44	315	11·967
	5. Nadukuppam	I	526·62	51	1·409
	6. Thagarakuppam	I	255·31	5	0·631
	7. Andiappanur	I	485·62	222	2·304
	8. Rajapalayam	I	532·16	564	7·678
	9. Pudur unreserve	I	687·97	374	33·610
	10. Kambugudi unreserve	I	409·14	Not worked.	
	11. Pudur V.F.S.	V.F.S.	1537·81	392	30·275
	12. Puliyur V.F.S.	V.F.S.	1,780·61	330	33·362
	13. Kambugudi	V.F.S.	1,537·81	76	4·921
	Range Total			3,223	187·245
II. Alangayam Range	1. Vasanthapuram	I	283·28	45	0·430
	2. Kottur	I	333·87	No extraction.	
	3. Athanavur	I	427·29	No extraction.	
	4. Yelagiri V.F.S. . .	I	1,934·39	23	0·207
	Range Total .			68	0·637
III Chengam Range	1. Koottathur	I	764·86	22	0·686
	2. Thalur	I	380·40	536	39·989
	3 Perumattam	I	315·15	1,010	85·638
	4. Melpet	I	366·63	1,568	116·016
	5. Athipattu	I	340·34	1.380	149·852
	6. Nellivoy	I	554·42	1,447	184·896
	7. Nallapattu	I	457·29	82	2·401
	8. Pelamarathur	VFS	2.352·44	199	12·414
	9. Melpet	VFS	1.025·46	548	40·550
	10. Nellivoy	VFS	462·15	727	67·247
	Range Total ..	..	..	7,519	698·689
	Division Total	..	..	10,810	886·571

Name of Range.	*Name of series.*	1965–66			
		Coupe number.	*Extent.*	*Trees.*	*Yield.*
(1)	(2)	(23)	(24)	(25)	(26)
			(IN HA.)		(IN TONNES)
I. Tirupathur	1. Singarapet	II	1,644·64	243	14·632
	2. Puliyur	II	616·74	No extraction.	
	3. Mambakkam	II	504·22	219	28·304
	4. Mottur	II	112·08	189	10·927
	5. Nadukuppam	II	395·78	377	23·419
	6. Thagarakuppam	II	342·36	85	7·033
	7. Andiappanur	II	543·90	215	8·753
	8. Rajapalayam	II	720·34	105	2·371
	9. Pudur unreserve	II	654·78	1,306	67·085
	10. Kambugudi unreserve	II	591·65	346	24·939
	11. Pudur V.F.S	V.F.S.	1,537·81	337	18·728
	12. Puliyur V.F.S.	V.F.S.	1,780·61	168	22·821
	13. Kambugudi	V.F.S.	1,537·81	59	2·835
	Range Total			3,649	231·847
II. Alangayam Range]	1. Vasanthapuram	II	1,080·50	48	0·382
	2. Kottur	II	538·23	No extraction.	
	3. Athanavur	II	196·27	No extraction.	
	4. Yelagiri V.F.S.	V.F.S.	1,934·39	3	0·015
	Range Total			51	0·397
III Chengam Range	1. Koottathur	II	574·65	7	0·146
	2. Thalur	II	241·19	217	13·167
	3. Perumattam	II	200·32	719	46·066
	4. Melpet	II	407·52	2,520	113.208
	5. Athipattu	II	388·50	2.132	169·189
	6. Nellivoy	II	428·98	not worked.	
	7. Nallapattu	II	809·37	not worked.	
	8. Pelamarathur	VFS	2.352·44	100	4.247
	9. Melpet	VFS	1,025·46	not worked.	
	10. Nellivoy	VFS	462·15	not worked.	
	Range Total..	..	..	5,695	346·023
	Division Total	..	..	9,395	578·267

APPENDIX XXVII—*cont.*

STATEMENT SHOWING THE ANNUAL YIELD OF SANDALWOOD (HEARDWOOD) FROM THE DIFFERENT COUPES OF TIRUPATHUR DIVISION FROM THE YEAR 1960–61 TO 1975–76—*cont.*

Name of Range.	*Name of series.*	1966–67			
		Coupe No.	*Extent.*	*Trees.*	*Yield*
(1)	(2)	(27)	(28)	(29)	(30)
			(IN HA.)		(IN TONNES.)
I. Tirupathur Range	1. Singarapet	III	1,464·96	Not worked.	
	2. Puliyur	III	607·72	Not worked.	
	3. Mambakkam	III	667·31	123	20·90
	4. Mottur	III	1,066·74	147	15·988
	5. Nadukuppam	III	623·22	207	9·446
	6. Thagarakuppam	III	134·36	Not worked.	
	7. Andiappanur	III	880·19	Not worked.	
	8. Rajapalayam	III	376·36	204	4·457
	9. Pudur unreserve..	III	757·96	Not worked.	
	10. Kambugudi unreserve.. ..	III	267·09	Not worked.	
	11. Pudur V.F.S.	V.F.S.	1,537·81	Not worked.	
	12. Puliyur V.F.S.	V.F.S.	1,780·61	Not worked.	
	13. Kambugudi	V.F.S.	1,537·81	Not worked.	
	Range Total ..	..	..	681	50·800
II. Alangayam Range	1. Vasanthapuram	III	284·90	39	0·339
	2. Kottur	III	536·21	Not worked.	
	3. Athanavur	III	250·90	Not worked.	
	4. Yelagiri V.F.S.	V.F.S.	1,934·39	Not worked.	
	Range Total ..	..	..	39	0·339
III Chengam Range	1 Koottathur	III	572·63	Not worked.	
	2. Thalur	III	176·44	Do.	
	3 Perumattam	III	309·18	Do.	
	4. Melpet	III	87·40	Do.	
	5. Athipattu..	III	271.14	Do.	
	6. Nellivoy	III	424·92	Do.	
		II	428·98	1.068	79·992
	7. Nallapattu	III	261·02	Do.	
		II	809·37	Not worked. 54	6.251
	8. Pelamarathur	VFS	2.352·44	Not worked.	
	9. Melpet	VFS	1,025·46	484	26·325
	10. Nellivoy	VFS	462·15	648	61·589
	Range total ..			2.254	174·157
	Division total ..			2.974	225·296

APPENDIX XXVII—*cont.*

STATEMENT SHOWING THE ANNUAL YIELD OF SANDALWOOD (HEARDWOOD) FROM THE DIFFERENT COUPES OF TIRUPATHUR DIVISION FROM THE YEAR 1960–61 TO 1975–76—*cont.*

Name of Range.	*Name of series.*	1967–68			
		Coupe number.	*Extent.*	*Trees.*	*Yield.*
(1)	(2)	(31)	(32) (IN HA.)	(33)	(34) (IN TONNES.)
I. Tirupathur Range	1. Singarapet	I	1,339·51	Not worked.	
		IIIx	1,464·96	576	30·95
	2. Puliyur	I	1,556·42	Not worked.	
		III*	607·72	271	6·319
	3. Mambakkam	I	726·00	Not worked.	
	4. Mottur	I	953·44	Not worked.	
	5. Nadukuppam	I	226·62	Not worked.	
	6. Thagarakuppam	I	355·31	Not worked.	
		III*	134·36	21	0·302
	7. Andiappanur	I	485·62	Not worked.	
		III*	880·19	135	24·707
	8. Rajapalayam	I	532·16	Not worked.	
	9. Pudur U.R.	I	687·97	Not worked.	
		III*	757·96	813	63·71
	10. Kambugudi U.R.	I	409·14	Not worked.	
		III*	267·09	1,275	79·74
	11. Pudur V.F.S.	V.F.S.	1,537·81	290	23·78
	12. Puliyur V.F.S.	V.F.S.	1,780·61	1,412	150·150
	13. Kambugudi	V.F.S.	1,537·81	409	24·405
	Range Total ..	..	..	5,202	404·082

* arrear coupes.

Alangayam Range	1. Vasanthapuram	I	283·28	31	0·674
	2. Kottur	I	333·87	No extraction.	
	3. Athanavur	I	457·29	No extraction.	
	4. Yelagiri V.F.S.	V.F.S.	1,934·39	No extraction.	
	Range Total ..	..	..	31	0·674
III Chengam Range	1 Koottathur	I	764·86	36	3,247
		III*	572·63	51	2.747
	2 Thalur	I	380·40	Not worked	
		III*	176·44	288	12·390
	3 Perumattam	I	315·65	Not worked	
		III*	309·18	444	21·589
	4 Melpet	I	366·67	Not worked	
		III*	87·40	1,484	84·459
	5 Athipattu	I	340·34	Not worked	
		III*	271·14	2.198	153·444
	6 Nellivoy	I	554·42	Not worked	
		III*	424·92	1.071	99·465
	7 Nallapattu	I	457·29	Not worked	
		III*	262·02	194	4·641
	8 Pelamarathur	VFS	2,352·44	367	15·828
	9 Melpet	VFS	1,025·46	775	42·825
	10 Nellivoy	VFS	462·15	564	72·262
	Range Total ..		..	7.472	512·897
		Divsion Total	..	12.705	917·653

* arrear coupes.

Name of Range.	*Name of Series.*	1968–69			
		Coupe number.	*Extent.*	*Trees.*	*Yield.*
	(2)	(35)	(36)	(37)	(38)
			ha.		(TONNES.)
Tirupathur Range	1. Singarapet	II	1,644·64	Not worked.	
	2. Puliyur	II	616·74	Not worked.	
	3. Mambakkam	II	504·24	Not worked.	
	4. Mottur	II	112·09	Not worked.	
	5. Nadukuppam	II	395·78	Not worked.	
	6. Thagarakuppam	II	342·36	Not worked.	
	7. Andiappanur	II	543·90	Not worked.	
	8. Rajapalayam	II	720·34	Not worked.	
	9. Pudur U.R.	II	654·78	Not worked.	
	10. Kambagudi U.R.	II	591·65	Not worked.	
	11. Pudur V.F.S.	V.F.S.	1,978·91	345	63·582
	12. Puliyur V.F.S.	V.F.S.	1,780·61	80	13·218
	13. Kambugudi V.F.S.	V.F.S.	1,537·81	1,559	170·012
	Range total ..	..	..	1,984	246·812
II Alangayam Range	1. Vasanthapuram	II	1,080·50	Not workeed.	
	2. Kottur	II	538·23	Not worked.	
	3. Athanavur	II	196·27	Not worked.	
	4. Yelagiri V.F.S.	V.F.S.	1,934·39	Not worked.	
	Range total ..	..	..	..	..
III. Chengam Range	1. Koottathur	II	574·65	No extraction.	
	2. Thalur	II	241·19	No extraction.	
	3. Perumattam	II	200·32	No extraction.	
	4. Melpet	II	407·52	No extraction.	
	5. Athipattu	II	388·50	No extraction.	
	6. Nellivoy	II	428·98	No extraction.	
	7. Nallapattu	II	809·37	No extraction.	
	8. Pelamarathur	VFS	2,3[illegible]·44	192	12·770
	9. Melpet VFS	VFS	1,025·46	476	27·575
	10. Nellivoy	VFS	462·15	368	35·517
	Range total ..	..	..	1,036	75·862
	Division tota	..	..	3,020	322·674

Name of Range.	*Name of series.*	1969–70.			
		Coupe number. (39)	*Extent.* (40) ha.	*Trees.* (41)	*Yield.* (42) (TONNES.)
I. Tirupathur Range	1. Singarapet	III	1,464·96	Not worked.	
	2. Puliyur	III	607·72	Not worked.	
	3. Mambakkam	III	667·31	Not worked.	
	4. Mottur	III	1,066·74	Not worked.	
	5. Nadukuppam	III	623·22	Not worked.	
	6. Thagarakuppam	III	134·36	Not worked.	
	7. Andiappanur	III	880·19	Not worked.	
	8. Rajapalayam	III	376·36	Not worked.	
	9. Pudur U.R.	III	757·96	Not worked.	
	10. Kambagudi U.R.	III	267·09	Not worked.	
	11. Pudur V.F.S.	V.F.S.	1,978·91	85	11·856
	12. Puliyur V.F.S.	V.F.S.	1,780·61	1,004	177·231
	13. Kambugudi V.F.S.	V.F.S.	1,537·81	59	10·773
		Range total ..		1,148	199·860
II. Alangayam Range	1. Vasanthapuram	III	284·90	Not worked.	
	2. Kottur	III	536·21	Not worked.	
	3. Athanavur	III	250·90	Not worked.	
	4. Yelagiri V.F.S.	V.F.S.	1,934·39	Not worked.	
	Range total ..	..	..	..	..
III. Chengam Range	1. Koottathur	III	572·63	Not worked.	
	2. Thalur	III	176·44	Not worked.	
	3. Perumattam	III	309·18	Not worked.	
	4. Melpet	III	87·40	Not worked.	
	5. Athipattu	III	271.14	Not worked.	
	6. Nellivoy	III	424·92	Not worked.	
	7. Nallapattu	III	261·02	Not worked.	
	8. Pelamarathur	V.F.S.	2,352·44	777	65·963
	9. Melpet V.F.S.	V.F.S.	1,025·46	144	14·710
	10. Nellivoy V.F.S.	V.F.S.	462·15	187	12·442
		Range total ..		1,108	93·115
		Division Total ..		2,256	292·975

Name of Range.	*Name of series.*	1970–71			
		Coupe number.	*Extent.*	*Trees.*	*Yield.*
		(43)	(44)	(45)	(46)
			ha.		(TONNES.)
I. Tirupathur Range	1. Singarapet	I	1,339·51	163	5·152
	2. Puliyur	I	1,556·42	239	28·503
	2. Mambakkam	I	726·00	936	85·714
	4. Mottur	I	953·44	320	11·363
	5. Nadukuppam	I	226·62	58	1·810
	6. Thagarakuppam	I	355·31	18	0·341
	7. Andiappanur	I	485·62	102	0·959
	8. Rajapalayam	I	532·16	150	2·150
	9. Pudur U.R.	I	687·97	891	93·461
	10. Kambugudi U.R.	I	409·14	51	0·852
	11. Pudur V.F.S.	VFS	1,978·91	72	14·935
	12. Puliyur V.F.S.	VFS	1,780·61	146	12·095
	13. Kambugudi V.F.S.	VFS	1,537·81	769	91·294
		Range total		3,915	348·629
II. Alangayam Range	1. Vasanthapuram	I	283·28	not worked.	
	2. Kottur	I	338·87	not worked.	
	3. Athanavur	I	457·29	not worked.	
	4. Yelagiri V.F.S.	VFS	1,934·39	not worked.	
III. Chengam Range	1. Kootathur	I	764·86	15	0·287
	2. Thalur	I	380·40	535	13·709
	3. Perumattam	I	315·65	1,442	72·796
	4. Melpet	I	366·63	1,669	72·787
	5. Athipattu	I	340·34	1,197	58·771
	6. Nellivoy	I	554·42	693	74·755
	7. Nallapattu	I	457·29	82	6·459
	8. Pelamarathur	VFS	2,352·44	422	25·951
	9. Melpet V.F.S.	VFS	1,025·46	197	16·848
	10. Nellivoy V.F.S.	VFS	462·15	110	7·422
		Range total		6,362	348·785
		Division total		10,277	697·414

Name of Range.	*Name of Series.*	1971–72 *Coupe number.*	 *Extent.*	 *Trees.*	 *Yield.*
		(47)	(48)	(49)	(50)
			ha.		TONNES.
I. Tirupathur Range	1. Singarapet	II	1,644·64	357	16·708
	2. Puliyur	II	616·74	no extraction	
	3. Mambakkam	II	504·22	1,091	77·398
	4. Mottur	II	112·09	239	5·717
	5. Nadukuppam	II	395·78	91	4·446
	6. Thagarakuppam	II	342·36	27	0·401
	7. Andiappanur	II	543·90	85	2·687
	8. Rajapalayam	II	720·34	140	1·916
	9. Pudur U.R.	II	654·78	217	14·667
	10. Kambugudi U.R.	II	591·65	200	19·852
	11. Pudur V.F.S.	VFS	1,978·91	108	14·183
	12. Puliyur V.F.S	VFS	1,780·61	372	43·577
	13. Kambugudi VFS	VFS	1,537·81	695	70·122
		Range total	..	3,622	271·674
II. Alangayam Range	1. Vasanthapuram	II	1,080·50	59	0·895
	2. Kottur	II	538·23	no extraction.	
	3. Athanavur	II	196·27	Do.	
	4. Yelagiri V.F.S.	V.F.S.	1,934·39	Do.	
		Range total	..	.. 59	0·895
III. Chengam Range	1. Koottathur	II	574·65	30	1·147
	2. Thalur	II	241·19	84	4·450
	3. Perumattam	II	200·32	336	15·362
	4. Melpet	II	407·52	335	10·364
	5. Athipattu	II	388·50	391	18·402
	6. Nellivoy	II	428·98	360	12·463
	7. Nallapattu	II	809·37	232	17·693
	8. Palamarathur	VFS.	2,352·44	328	12·732
	9. Melpet VFS.	V.F.S.	1,025·46	41	1·403
	10. Nellivoy V.F.S.	VFS	462·15	192	7·882
		Range total	..	2,329	102·898
		Division total	..	6,010	375·467

Name of Range.	*Name of Series.*	1972–73			
		Coupe number.	*Extent.*	*Trees.*	*Yield.*
			ha.		TONNES.
		(51)	(52)	(53)	(54)
I. Tirupathur Range	1. Singarapet	III	1,464·96	358	40·731
	2. Puliyur	III	607·72	102	1·383
	3. Mambakkam	III	667·31	1,056	81·275
	4. Mottur	III	1066·74	139	1·969
	5. Nadukuppam	III	623·22	64	2·563
	6. Thagarakuppam	III	134·36	26	0·496
	7. Andiappanur	III	880·19	125	2·635
	8. Rajapalayam	III	376·36	115	1·375
	9. Pudur U.R.	III	757·96	90	9·878
	10. Kambugudi U.R.	III	267·09	301	30·644
	11. Pudur V.F.S.	VFS	1,978·91	435	37·174
	12. Puliyur V.F.S.	VFS	1,780·61	883	90·855
	13. Kambugudi V.F.S.	VFS	1,537·81	94	4·456
		Range total ..		3,788	305·434
II. Alangayam Range	1. Vasanthapuram	III	284·90	38	0·678
	2. Kottur	III	536·21	not worked.	
	3. Athanavur	III	250·90	not worked.	
	4. Yelagiri V.F.S.	VFS	1,934·30	not worked.	
		Range total ..		38	0·678
IV. Chengam Range	1. Kootathur	III	572·63	124	4·503
	2. Thalur	III	176·44	33	1·073
	3. Perumattam	III	309·18	69	2·759
	4. Melpet	III	87·40	323	6·610
	5. Athipattu	III	274·14	389	12·027
	6. Nellivoy	III	424·92	272	7·719
	7. Nallapattu	III	261·02	128	7·429
	8. Palamarathur	VFS	2,352·44	284	11·019
	9. Melpet VFS	VFS	1,025·46	79	3·183
	10. Nellivoy VFS	VFS	962·15	50	3·693
		Range Total ..		1,751	60·015
		Division Total ..		5,577	366·127

APPENDIX.

1973-74.				1974-75.				Total for 1960-61 to 1974-75.	
Coupe number. (55)	Extent. ha. (56)	Trees. (57)	Yield. TONNES. (58)	Coupe number. (59)	Extent. ha. (60)	Trees. (61)	Yield. TONNES. (62)	Trees. (63)	Yield. (64)
I	1,329·51	355	20·802	II	1,644·64	1,031	32·516	..	..
I	1,556·42	170	15·642	II	616·74	not worked.		..	..
I	726·00	1,031	63·398	II	504·22	874	32·584	..	..
I	953·44	226	5·414	II	112·06	40	7·933	..	..
I	226·62	not worked.		II	395·78	264	8·202	..	..
I	355·31	not worked.		II	342·36	104	2·487	..	..
I	485·62	80	2·420	II	543·90	208	6·990	..	..
I	532·16	96	1·897	II	720·34	431	9·822	..	..
I	687·97	3,339	295·853	II	654·78	987	82·551	..	..
I	409·14	26	1·228	II	591·65	141	12·265	..	..
VFS	1,978·91	723	71·329	VFS	1,978·91	304	38·974	..	..
VFS	1,780·61	328	35·598	VFS	1,780·61	1,095	147·300	..	..
VFS	1,537·81	42	4·086	VFS	1,537·81	173	9·326	..	..
		6,416	517·667			5,652	390·250	59,484	4,339.005
I	283·28	5	0·060	II	1,080·50	57	0·691	..	..
I	333·87	not worked.		II	538·23	not worked.		..	..
I	457·29	not worked.		II	196·27	not worked.		..	..
VFS	1,934·39	not worked.		VFS	1,934·39	not worked.		..	..
		5	0·060			57	0·691	2,082	32·618
I	764·86	45	1·350	II	574·65	423	10·259	..	..
I	380·40	48	2·096	II	241·19	116	2·378	..	..
I	315·65	370	14·163	II	200·32	153	4·910	..	..
I	366·63	301	8·087	II	407·52	295	9·299	..	..
I	340·34	734	27·713	II	388·50	533	18·752	..	..
I	554·42	859	40·609	II	428·98	490	15·567	..	..
I	457·29	232	6·868	II	809·37	912	35·305	..	..
VFS	2,352·44	706	21·648	VFS	2,052·44	427	15·321	..	..
VFS	1,025·46	243	13·971	VFS	1,025·46	107	3·822	..	..
VFS	462·15	109	11·631	VFS	462·15	26	1·163	..	..
		3,647	148·136			3,482	116·766	70,649	5,509·634
		10,068	665·863			9,191	507·707	1,32,215	9,881·257

APPENDIX XXVIII.

STATEMENT SHOWING THE REVENUE AND YIELD PARTICULARS FROM BAM BOO COUPES IN TIRUPATHUR DIVISION FROM 1960–61 to 1974–75.

Name of Coupe.	Year of working.	Coupe No.	Revenue Rs.	Yield in each varieties in tonnes			Dokku.	Varai.	Thadukku	Karanai	Enikkal.	Vittam	Vedar.	Total yield.
				Peruvarai	Siruvarai	Split.								
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
I. TIRUVANNAMALAI RANGE.														
Nil.														
II SATHANUR RANGE.—														
1 Nathampalli Bamboo felling Series.	1960-61	III	38,010.00	289.000	92.235	..	..	..	..	..	..	..	..	381.235 Sold along with Valasamalai BC.
	1961–62	I	30,000.00	192.525	50.375	..	..	..	..	..	..	..	..	242.900
	1962–63	II	14,010.00	50.575	11.291	..	0.964	..	..	..	..	..	..	62.830
	1963–64	III	31,200.00	48.085	1.742	0.076	..	..	..	..	..	..	..	49.908
	1964–65	I	47,010.00	592.025	251.053	..	..	..	..	..	..	..	..	843.078 Sold along with Valasamalai BC.
	1965–66	II	80,210.00	304.980	136.937	..	..	..	..	..	..	..	..	441.917 Sold along with Valasamalai BC.
	1966–67	III	40,000.00	297.500	28.380	..	..	..	..	..	..	..	..	325.880
	1967–68	I	42,260.00	369.750	47.085	..	..	..	..	..	..	..	..	416.835
	1968–69	II	Sale dropped in Conservator of Forests No 33105-67 L, dated 19—12—1968.			..	..	..	..	..	..	..	..	
	1969–70	III	Sale dropped in Conservator of Forests No. 33258-68 I., dated 12—10—1970.			..	..	..	..	..	..	..	..	..
	1970–71	I	27,500.00	340.850	411.510	..	..	..	..	..	..	..	..	752.360
	1971–72	II	20,010.00	128.350	25.155	..	..	..	..	..	..	..	..	153.505
	1972–73	III	28,010.00	218.875	19.763	..	..	..	..	..	..	..	..	238.638
	1973–74	I	76,700.00	208.675	697.632	..	..	..	..	..	..	..	..	906·307
	1974–75	II	60,000.00	480.420	544.871	..	..	..	..	..	..	..	..	1,025.291

ABSTRACT.

	Average Revenue per rotation.	Yield per rotation in tonnes.
Coupe I	44,694.00	632.296
Coupe II	34,846.00	336.709
Coupe III	27,444.00	199.132

2 **Valasamalai** bamboo felling series.	1960–61	III	..	..	..	..	..	..	..	..	Sold along with **Nathampalli** BC.			
	1961–62	I	..	..	..		..	..	..	..	..	..	..	..
	1962–63	II	..	..	..	..	..	..	..	..	..	..	..	..
	1963–64	III	31,200.00	104.091	15.257	1.272	1.440	..	..	..	0.091	..	..	122.151
	1964–65	I	..	519.945	245.100	..	..	..	..	..	..	..	..	765.045
	1965–66	II	..	279.999	298.678	..	..	..	..	..	..	..	..	576.677
	1966–67	III	45,210.00	454.750	52,567	..	..	..	..	..	..	..	..	507.317
	1967–68	I	7,060.00	Allotted to Paper Mill Pallipalayam			..	..	..	..	..	..	..	641.867
	1968–69	II	16,000.00	731.000	10·320	..	..	..	..	..	..	..	..	741.320
	1969–70	III	28,060.00	612.000	259.419	..	..	..	..	..	..	..	..	871.419
	1970–71	I	20,810.00	249.050	376.680	..	..	..	..	..	..	..	..	625.730
	1971–72	II	24,110.00	137.00	23.865	..	..	..	..	..	..	..	..	161.565
	1972–73	III	30,000.00	250.835	32.585	..	..	..	..	..	..	..	..	283.420
	1973–74	I	55,500.00	55,250	564.375	..	..	..	..	..	..	..	..	619.625
	1974–75	II	65,600.00	396.100	944.280	..	..	..	..	..	..	..	..	**1340.380**

ABSTRACT.

	Average Revenue per rotation.	*Yield per rotation in tonnes.*
Coupe I	16,676.00	530.453
Coupe II	21,142.00	563.988
Coupe III	26,894.00	356.861

3. **Swamimalai** bamboo felling **series.**	1960–61	III	4,025.00	0.850	19.350	5.856	..	..	..	..	.	.	.	26·056
	1961–62	I	2,925.00	18.615	2.322	..	..	..	..	..	..	0.224	..	21.161
	1962–63	II	3,550.00	2.797	..	..	0.217	..	..	..	..	0.238	..	3.252
	1963–64	III	5,025.00	..	42.312	2.074	0.558				..	..	..	44·944
	1964–65	I	3,000.00	120.096	..	..	..	..	..	..	..	..	..	120.096
	1965–66	II	13,000.00	..	..	..	..	..	..	..	..	..	..	**Yield not avilable.**
	1966–67	III	6,010.00	77.350	3.089	3.904	3.038	..	..	..	..	..	..	87.381
	1967–68	I	3,205·00	60.350	13.674	..	..	.	..	..	..	..	..	74.024
	1968–69	II	65,000.00	633.250	16.718	..	0.465	..	..	..	..	..	..	**650·433**

Name of Coupe.	Year of working.	Coupe No.	Revenue Rs.	Yield in each varieties in tonnes.			Dokku	Varai	Thadakku	karanai	Enilkkal,	Vittam	Vedar,	Total Yield.
				Peruvarai	Siruvarai	Split								
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
SWAMIMALAI BAMBOO FELLING SERIES—cont.														
	1969–70	II	34,000.00	133.535	191.694	..	..	..	..	..	..	..	..	325.229
	1970–71	I	5,100.00	462.400	304.182	..	..	..	..	..	..	..	..	766.582
	1971–72	II	8,250.00	279.480	318.914	..	..	..	..	..	..	..	..	598.394
	1972–73	II	18,340.00	337.773	530.500	..	..	..	..	..	..	..	..	868.273
	1973–74	I	56,100.00	441.150	490.200	..	..	..	..	..	..	..	..	931.350
	1974–75	II	57,999.00	219.300	242.004		..	..	..	..	..	..	..	461.304

ABSTRACT

	Average revenue per rotation.	Yield per rotation in tonne.
Coupe I	14,066.00	382.643
Coupe II	29,559.80	342.677
Coupe III	13,480.00	270.377

Name of Coupe.	Year of working.	Coupe No.	Revenue Rs.	Peruvarai	Siruvarai	Split	Dokku	Varai	Thadakku	karanai	Enilkkal,	Vittam	Vedar,	Total Yield.
III. *Chengam Range.*—														Sold along with North and South Nallapattu BC.
4. Palamarathur Bamboo felling series.	1960–61	II	6,700.00	151.376	82.463	29.343	54.083	..	0.617	..	..	..	..	317.882
	1961–62	III	15,000.00	316.107	17.225	...	..	126.225	0.191	0.144	..	..	..	459.892
	1962–63	I	3,070.00	..	..	..	..	..	..	..	..	..	..	Yield not available.
	1963–64	II	7,010.00	..	..	..	..	..	..	..	..	..		Do.
	1964–65	III	6,000.00	..	50.695	..	..	..	..	..	..	..	..	50.695 Do.
	1965–66	I	4,700.00	420.750	50.258	..	..	..	..	..	..	..	..	471.008 Do.
	1966–67	II	8,025.00	..	..	..	..	..	..	..	..	..	..	150.000 Do.
	1967–68	III	819.00	..	..	..	..	..	..	..	..	..	..	74·438 Do.

	1968–69		767.00	..	..	..	..	..	..	..	..	..	.. Do.	69.682
	1969–70	II	Sale dropped in Conservator of Forests No. 33258-68 L, dated 12—10—1969					..	..	..	..	..	..	..
	1970–71	III	4,200.00	1.462	21·298	..	..	4.046	..	..	..	.		26.806
	1971–72	I	2,080.00	5.627	23.117		..	0.383	..	..	..	..	..	29.127
	1972–73	II	3,010.00	..	31.670	..	..	7.446	..	..	..	..	..	39.116
	1973–74	III	Sale dropped in Conservator of Forests No. 27170-72/L, dated 17—6—1973						..	..	..			..
	1974–75	I	2,600.00			..	..	..	..	..	..	..	Yield not available.	

ABSTRACT.

	Average Revenue per rotation.	Yield per rotation in tonnes.
Coupe I	13,717.00	113.963
Coupe II	24,745.00	101.400
Coupe III	26,019.00	122.366

5 Nallapattu North bamboo felling series.	1960–61	II	..	..	..	..	..	..	..	..	..	..	..	Sold along with Pelamarathur BC
	1961–62	II	..	..	..	..	..	..	..	..	..	..	..	Do.
	1962–63	I	..	..	..	..	..	..	..	..	..	..	..	Do.
	1963–64	II	..	..	..	..	..	..	..	..	..	..	..	Do.
	1964–65	III	..	..	..	..	..	..	..	..	..	..	..	Do.
	1965–66	I	..	..	..	..	..	..	..	..	..	..	..	Do.
	1966–67	II	..	..	..	..	..	..	..	..	..	..	..	Do.
	1967–68	III	8,000·00	41·650	41·345	..	..	..	0·048	..	..	..	..	83·043
	1968–69	I	2125·00	287·674	10·610	..	..	..	..	..	..	..	..	298·284
	1969–70	II	3,040·00	41·497	105·122	..	..	15·674	..	..	..	0·192	..	162·485
	1970–71	III	13,060·00	6·502	5·857	..	..	16·805	..	..	..	..	..	29,164

Name of Coupe.	*Year of working.*	*Coupe No.*	*Revenue Rs.*	*Yield in each varieties in tonnes.* Peruvarai	Siruvarai	Split	*Dokku.*	*Varai.*	*Thadukku*	*karanai*	*Enilkkal.*	*Vittam*	*Vedar,*	*Total Yield.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	1971–72	I	2,005·00	5·015	17·350	..	0·125	..	..	..	..	..	..	22·490
	1972–73	II	2,900·00	7·438	31·669	..	..	..	..	..	..	..	..	39·107
	1973–74	III	..	..	Sale dropped in Conservator of Forests No. 27170/72, L dated 17th June 1973.							..	..	..
	1974–75	I	3,510·00	..	..	28·294	0·078	17·042	..	..	..	..	..	45·414

ABSRTACT.

Average Revenue per rotation.		*Yield per rotation in tonnes.*
Coupe No. I	.. 1528·00	72·238
Coupe No. II	.. 1,188·00	40·318
Coupe No. III	.. 4,212·00	22·441

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
6 Nallapattu south Bamboo felling series.	1960–61	II	..	..	..	..	..	..	..	..	..	..	..	Sold along with palamarathur BC.
	1961–62	III	..	..	..	..	..	..	..	..	..	..	..	Do.
	1962–63	I	..	..	..	..	..	..	..	..	..	..	..	Do.
	1963–64	II	..	..	..	..	..	..	..	..	..	..	..	Do.
	1964–65	III	..	..	..	..	..	..	..	..	..	..	..	Do.
	1965–66	I	..	..	..	..	..	..	..	..	..	..	..	Do.
	1966–67	II	..	..	..	..	..	..	..	..	..	..	..	Do.
	1967–68	III	7,500·00	377·060	114·010	..	..	..	0·053	..	..	..	..	491·123
	1968–69	I	2,015·00	..	1·432	..	..	..	..	..	..		..	1·432
	1969–70	II	2,930·00	6·120	15·441	..	..	..	0·0736	..	..	0·028	..	22·325
	1970–71	III	730·00	1,700	5,098	..	..	..	..	..	..	..		6·798
	1971–72	I	2,010·00	15·275	38·249	..	..	..	0·180	..	..	..	..	53·704
	1972–73	II	3,030·00	..	4,038	..	..	..	..	..	..	..	..	4·038
	1973–74	III					Sale dropped in Conservator's No. 27170/72, dated 17th June 1973.							
	1974–75	I	3,010·00	17·348	138·610	0·025	..	..	0·076	..	..	..	..	156·059

ABSTRACT

Average Revenue per rotation.		*Yield per rotation in tonnes.*
Coupe I	1807–00	42·239
Coupe II	1192–00	5·272
Coupe III	1646–00	99·584

7 **Kuppanatham felling serial**	bamboo	1960–61	II	820·00	..	6·966	2·135	..	..	..	..	..	..	..	9·101
		1961–62	III	Sale dropped											
		1962–63	I	1,275·00	25·245	15·351	..	..	..	..	..	..	..	..	40·596
		1963–64	II	1,210·00	..	..	..	..	..	..	..	..	..	..	97·111
		1964–65	III	700·00	..	17·157	..	..	..	..	..	..	..	..	17·157
		1965–66	I	3,100·00	..	53·385	..	..	..	..	..	..	..	..	53·385
		1966–67	II	1,300·00	..	..	..	..	..	..	..	..	..	..	37·951
		1967–68	III	3,500·00	9·350	13·287	4·782	..	..	..	..	..	..	..	27·419
		1968–69	I	2,305·00	78·974	42·106	..	1·438	..	..	0·179	..	0·353	2,258	125·308
		1969–70	II	1,335·00	2·550	30·199	0,205	..	..	..	..	..	..	..	32·954
		1970–71	III	Sale dropped in Conservator's No 27170/72 L dated 17th June 1973											
		1971–72	I	2,540·00	4·318	82·515	0·455	..	..	..	..	..	..	..	87·288
		1972–73	II	6,070·00	9·562	3·079	..	..	..	..	..	..	..	..	12·641
		1973–74	III	Sale dropped in Conservator of Forests No 33207/69L dated 4th September 1970											
		1974–75	I	2,900·00	74·706	4·940	29·807	13·013	..	..	..	..	..	..	122·466

ABSTRCAT

Average Revenue per rotation.		*Yield per rotation in tonnes.*
Coupe I	2,424·00	97·111
Coupe II	2,147·00	37·951
Coupe III	840·00	8·915

8 **Tenmalai** East felling series	Bamboo	1960–61	II	140·10	1,419·475	398·904	205·411	147·572	..	1,180	..	..	..	..	2,172·542
		1961–62	III	18,000·00	850·281	21·953	43·481	..	..	4·450	..	..	..	..	920·165 Sold along with Kallathur BC
		1692–63	I	–	..	..	..	..	..	..	..	..	..	..	
		1963–64	II	..	..	..	..	..	..	..	..	..	..	..	Do
		1964–65	III	..	..	..	..	..	..	..	..	..	..	..	Sold along with Tenmalai central BC
		1965–66	I	..	..	..	..	..	..	..	..	..	..	..	Do

APPENDIX XXVIII– *cont.*

Name of coupe	*Year of working*	*Coupe No.*	*Revenue Rs*	*Yield in each varieties in tonnes.* *Peruvaral*	*Siruvaral*	*Split*	*Dokku*	*Varal*	*Thadukkn*	*Karanai*	*Enikkal*	*Vittam*	*Vedar*	*Total yield*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Tenmalai East Bamboo felling Series—*cont.*	**1966–67**	II	334·00	..	..	..	..	..	..	..	..	..	..	Sold along with Tenmalai central Kallathur and Bandirev B.C. 30·387
	1967–68	III	6,099·00	111·180	50·549	..	..	..	..	..	..	..	..	161·729
	1968–69	I	1,655·00	..	..	..	..	..	..	..	..	..	..	150·436
	1969–70	II	..	..	..	..	..	..	..	..	..	..	..	Not worked (alloted to paper mills).
	1970–71	III	960·00	6·800	3·225	..	..	..	..	..	..	..	..	10·025
	1971–72	I	4,650·00	33·218	137·127	..	..	..	0·377	..	..	..	..	170·722
	1972–73	II	6,400·00	45·755	63·920	..	..	..	..	..	..	..	..	109·675
	1973–74	III	8105·00	47·693	67·540	..	0·225	..	0·071	..	..	..	..	115·509
	1974–75	I	7,550·00	51·255	149·948	..	..	..	0·008	..	..	..	..	200·761

ABSTRACT

	Average Revenue per rotation. (1)	*Yield per rotation in tonnes.* (2)
Coupe I	2,771·00	104·384
Coupe II	1,374·82	462·520
Coupe III	6,632·80	241·485

Name of coupe	*Year of working*	*Coupe No.*	*Revenue Rs*	*Peruvaral*	*Siruvaral*	*Split*	*Dokku*	*Varal*	*Thadukkn*	*Karanai*	*Enikkal*	*Vittam*	*Vedar*	*Total yield*
9 Tenmalai Central Bamboo felling series.	1960–61	II	..	..	..	..	..	..	..	..	..	..	..	Sold along with Tenmalai East BC.
	1961–62	III	..	..	..	..		..	..	..	..	..	..	Do.
	1962–63	I	..	..	..	..	..	..	..	..	..	..	..	Sold along with Kallathur B.C.

	1963–64	II	..	..	..	..	..	..	..	..	..	..	..	Do.
	1964–65	III	26,300·00	..	506·569	..	..	..	..	..	..	..	..	506·569
	1965–66	I	16,110·00	464·525	79·980	..	..	..	..	..	..	..	..	544·505
	1966–67	II	..	..	..	..	..	..	..	..	..	..	..	Sold along with Tenmalai East BC
	1967–68	III	30,000·00	390·515	170·873	0·963	1.255	..	..	..	..	..	..	1,563·606
	1968–69	I	6,500·00	278·290	37·936	..	..	..	..	..	..	..	..	316·266
	1969–70	II	15,155·00	29·699	12·250	2,883	0·261	..	..	..	..	51·526	..	96·619
	1970–71	III	39,010·00	242·326	347·590	5·214	1·309	..	..	..	..	..	..	596·439
	1971–72	I	8,795·00	583·143	10·655	..	..	..	..	..	..	..	..	593·798
	1972–73	II	16,010·00	566·066	81·803	..	..	..	..	..	..	..	..	137·869
	1973–74	III	Sale dropped in Conservator of Forests' No. 27170/72, dated 17th June 1973.									..	..	..
	1974–75	I	15,000·00	..	20·404	294·054	0·009	..	..	..	..	..	..	314·467

ABSTRLCT

	Average Revenue per rotation.	Yield per rotation in tonnes.
Coupe I	9,281·00	353·807
Coupe II	6,233·00	46·897
Coupe III	19,062·00	533·342

10 Bandirev bamboo Felling series.	1960–61	II	..	..		..	..	..	..	..	..	..	..	Sold along with Tenmalai East BC.
	1961–62	III	..	..	..	..	..	..	..	..	..	..	..	Do.
	1962–63	I	..	..	..	..	..	..	..	..	..	..	..	Sold along with Kallathur BC.
	1963–64	II	..	..	..	..	..	..	..	..	..	..	..	Do.
	1964–65	III	..	..	..	..	..	..	..	..	..	..	..	Sold along with Tenmalai Central B.C.

APPENDIX XXVIII—*cont.*

Name of coupe	Year of working	Coupe No.	Revenue Rs.	Yield in each varieties in tonnes. Peruvaral	Siruvaral	Split	Dokku	Varai	Thadukku	Karanai	Enikkal	Vittom	Vedar	Total yield
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	1965–66	I	..	..	..	..	..	..	..	..	..	..	..	Sold along with Tenmalai Central B.C.
	1966–67	II	..	..	..	..	..	..	..	..	..	..	..	Sold along with Tenmalai East BC.
	1967–68	III	6030·00	1,071·850	6·450	26·352	..	..	..	..	..	..	..	1,104·652
	1968–69	I	5,200·00	26·435	0·935	0·080	0·202	..	0·076	..	..	..	..	27·728
	1969–70	II	7,215·00	15·326	54·980	..	..	..	0·525	..	..	..	0·283	71·114
	1970–71	III	7,005·00	77·945	30·008	..	..	..	..	..	..	..	..	107·953
	1971–72	I	6,060·00	20·154	17·361	..	..	..	0·107	..	..	..	..	37·622
	1972–73	II	16,010·00	94·766	183·754	..	..	4·930	..	..	..	..	..	283·450
	1973–74	III	9,910·00	31·144	225·905	32·379	0·062	23·656	..	..	..	..	..	313·146
	1974–75	I	6,810 00	332·409	10·419	..	..	..	..	..	..	..	..	342·828

ABSTRACT

	Average Revenue per rotation.	Yield per rotation in tonnes.
Coupe I	3,614·00	81·635
Coupe II	4,645·00	70·913
Coupe III	4,589·00	305·150

Name of coupe	Year of working	Coupe No.	Revenue Rs.	Peruvaral	Siruvaral	Split	Dokku	Varai	Thadukku	Karanai	Enikkal	Vittom	Vedar	Total yield
11 Kallathur Bamboo felling Series.	1960–61	II	1,575·00	135·490	100·943	1·054	..	..	..	..	..	..	..	237·487
	1961–62	III	4,910·00	104·270	11·400	..	..	..	..	..	..	..	..	115·670
	1962–63	I	14,010·00	..	..	..	..	..	..	..	..	..	..	156·548
	1963–64	II	25,300·00	..	..	..	..	..	..	..	..	..	..	138·130
	1964–65	III	..	..	..	..	..	..	..	..	..	..	..	..
	1965–66	I	..	..	..	..	..	..	..	..	..	..	..	..
	1966–67	II	..	..	..	..	..	..	..	..	..	..	..	..
	1967–68	III	7,725·00	65·280	51·937	..	..	..	..	..	..	..	..	117·267

	1968–69	I	5,640·00	17·867	41·486	..	..	..	..	..	..	..	..	59·353
	1969–70	II	7,540·00	..	15·970	5·124	..	17·680	..	..	..	..	..	38·774
	1970–71	III	11,010·00	356·549	218·581	1,306	0·248	..	0·279	..	..	..	..	576·963
	1971–72	I	4,365·00	110·857	142·887	..	..	..	..	..	..	..	..	253·744
	1972–73	II	Sale dropped in Conservator of Forests No. 4110/73 L, dated 24th February 1973							..	..	..	..	..
	1973–74	III	Sale dropped in Conservator of Forests No. 27170/72, dated 1st June 1973							..	..	..	..	..
	1974–75	I	8,630·00	48·756	64·242	16·213	..	19·363	..	..	..	..	..	148·574

ABSTRACT

	Average Revenue per rotation. (1)	Yield per rotation in tonnes. (2)
Coupe I	6,529·00	156·548
Coupe II	6,882·10	82·878
Coupe III	4,729·00	161·980

IV. *Tirupathur Range.*—

12 Kambugudi bamboo felling series.	1960–61	II	8,000·00	444·941	33·857	0·478	37·526	..	..	0·767	8,595	..	..	526·164
	1961–62	III	25,010·00	917·074	91·917	..	2·828	..	..	..	..	..	..	1011·820
	1962–63	I	16,130·00	494·598	398·648	..	2,554	..	..	..	..	..	..	895·800
	1963–64	II	26,150·00	614·533	131·440	24·300	14·278	..	..	40·322	..	..	13·274	838·147
								Sold including Thagarkuappam.						
	1964–65	III	25,010 00	319·047	24·806	..	244·965	..	..	..	..	..	..	588·818
	1965–66	I	11,675·00	34·000	..	..	..	..	..	..	..	..	..	34·000
	1966–67	II	9,000·00	94·341	3·059	..	2·687	..	..	0·085	22·087	0·271	0·349	122·879
	1967–68	III	Sale dropped	..	..	..	..	..	..	..	..	..	..	..
	1968–69	I	Sale dropped	..	..	..	..	..	..	..	..	..	..	..
	1969–70	II	Sale dropped in Conservator's No. 33258/68, dated 12th October 1969.								..	..	..	..
	1970–71	III	2,965·00	15·954	14·183	..	..	..	..	..	..	..	..	30·137
	1971–72	I	14,200·00	..	..	..	..	3·595	..	..	..	..	..	3·595
	1972–73	II	13,250·00	..	..	..	..	..	..	..	..	..	..	495·730
	1973–74	III	978·60	..	..	..	..	..	..	..	..	..	..	88·959
													To paper mill.	
	1974–75	I	492·90	44·900	..	..	..	..	..	..	..	..	..	44·900

APPENDIX XXVIII—*cont.*

ABSTRACT.							
Average Revenue per rotation. (1)		*Yield per rotation in tonnes.* (2)					
Coupe I	939·58	195·659					
Coupe II	11,280·00	495·730					
Coupe III	10,792·72	343·946					

Name of Coupe (1)	*Year of working* (2)	*Coupe No,* (3)	*Revenue Rs.* (4)	*Yield in each varieties in tonnes.* *Peruvaral* (5)	*Siruvaral* (6)	*Split* (7)	*Dokku* (8)	*Varai* (9)	*Thadnkku* (10)	*Karanai* (11)	*Enikkal* (12)	*Vittam* (13)	*Vedar* (14)	*Total yield* (15)
13 **Andiappanur** Bamboo felling **Series.**	1960–61	II	1,030·00	55·642	4·882	0·585	0·393	..	..	..	—	—	..	61·502
	1961–62	III	—	—	—	—	..	..	..	..	—	—	..	**Yield** and **Revenue** not available.
	1962–63	I	530·00	16·617	2·386	..	1·116	..	..	..	0·312	..	—	20·431
	1963–64	II	1,550·00	67·932	143·641	76·542	2·604	..	..	..	..	..	9·636	300·355
	1964–65	III	970·00	..	..	..	..	..	..	..	..	..	..	26·338
	1965–66	I	1,800·00	61·327	..	..	2·197	..	..	0·114	..	0·597	..	64·235
	1966–67	II	2,000·00	46·580	10·707	..	1,180	..	..	..	..	..	..	58·467
	1967–68	III	Sale dropped in Conservator of Forests No. 31095/66, dated 10th August 1967.								..	..	..	..
	1968–69	I	1,610·00	57·842	28·431	..	..	..	..	..	..	..	..	86·273
	1969–70	II	1,805·00	17·425	4·644	..	..	..	..	..	..	..	..	22·069
	1970–71	III	1,710·00	17·212	2·915	..	..	..	..	..	..	..	..	20·127
	1971–72	I	2,260·00	..	..	..	0·372	3·357	..	..	..	..	..	3·729
	1972–73	II	2,210·00	6·239	9·378	..	..	..	..	..	..	..	..	15·617
	1973–74	III	359·15	..	—	..	—	..	..	..	..	..	..	32·650 To paper Mill.

ABSTRACT.			
Average Revenue per rotation. (1)		*Yield per rotation in tonnes.* (2)	
Coupe I	1,550·00	43·667	
Coupe II	1,719·00	91·602	
Coupe III	607·83	15·833	

14 Mambakkam felling Series.	Bamboo	1960–61	II	3,350·00	189·201	210·065	10·390	..	..	..	..	..	..	..	220·656
		1961–62	III	5,770·00	..	30·960	1·581	4·978	..	..	..	..	..	..	37·519
		1962–63	I	1,555·00	438·345	133·708	16·206	..	..	..	..	..	..	..	588·259
		1963–64	II	8,490·00	..	..	214·720	3,848	..	1,032	..	41·477	..	..	261·077
		1964–65	III	3,400·00	22·431	24·918	..	2,566	..	..	..	4·000	..	..	53·915
		1965–66	I	2,110·00	155·303	2·868	0·050	..	8·202	..	..	..	..	..	166·423
		1966–67	II	30,700·00	523·489	5·338	0·224	16·169	5·015	..	..	..	..	25·164	575·399
		1967–68	III	8,725·00	..	..	..	..	..	..	..	..	..	..	200·00 To paper Mill.
		1968–69	I	One third sale amount not paid on the date of sale. Resale ordered as per condition No. 15 of sale notice, dated 3rd December 1975.											
		..	..	..	..	..	..	..	..	..	..	..	..	..	..
		1969–70	I and II	Sale dropped in Conservator's No. 33258/68L, dated 12th October 1969.							..	..	..	..	..
		1970–71	III	Sale dropped in Conservator's No. 28997/71, L, dated 18th April 1972							..	..	..	..	..
		1971–72	I	Do.						..	..	..	..	..	..
		1972–73	II	Sale dropped in Conservator's No. 299999/71, L dated 23rd November 1972.							..	..	..	..	..
		1973–74	III	Sale dropped in Conservator's No. 27170/72, L dated 17th June 1973							..	..	..	..	..
		1974–75	I	Sale dropped in Conservator's No. 26998/73, L. dated 16th May 1974.								..	..	..	..

ABSTRACT.

	Average Revenue per rotation.	Yield per rotation in tonnes.	
	(1)	(2)	
Coupe I	3,853·00	170·139	
Coupe II	.. ..	11,628·00	230·629
Coupe III	3,579·00	58·287	

15 Thagarakuppam felling series.	Bamboo	1960–61	II	4,100·00	312·876	129·129	9·057	51·373	..	..	..	..	..	..	502·435
		1961–62	III	1,981·00	..	37·500	0·259	..	..	..	..	..	..	..	37·759
		1962–63	I	6,110·00	103·402	246·491	11·131	..	52·912	..	..	..	6·824	..	420·760
		1963–64	II	..	..	..	..	..	..	..	..	..	..	..	Sold along with Kambugudi B.C.

APPENDIX XXVIII—*cont.*

Name of coupe (1)	*Year of working* (2)	*Coupe No.* (3)	*Revenue Rs.* (4)	*Yield in each varieties in tonnes.* *Peruvarai* (5)	*Siruvarai* (6)	*Split* (7)	*Dokku* (8)	*Varai* (9)	*Thadukku* (10)	*Karanai* (11)	*Enikkal* (12)	*Vittam* (13)	*Vedar* (14)	*Total yield* (15)
	1964–65	III	6,510·00	57·689	2·616	..	..	..	..	..	..	..	..	60·305
	1965–66	I	6,050·00	79·347	13·444	0·169	2·045	8·202	..	..	..	..	..	103·207
	1966–67	II	16,060·00	296·777	152·551	1·581	25·103	4·284	..	..	..	0·091	..	480·387
	1967–68	III	3,555·00	15·512	60·913	..		49·504	..	..	..	..	..	125·929
	1968–69	I	21,600·00	372·504	315·456	0·283	..	..	..	..	..	..	..	68·243
	1969–70	II	19,010·00	179·146	185·650	..	..	..	..	..	..	..	..	364·796
	1970–71	III	10,005·00	200·549	296·578	..	..	..	..	..	..	..	..	497·127
	1971–72	I	12,250·00	85·850	138·288	58·401	0·099	10·650	..	..	..	..	..	293·288
	1972–73	II	25,210·00	190·476	306·269	..	..	..	..	..	..	..	..	496·745
	1973–74	III	1,268·75	..	..	..	..	..	..	..	..	..	..	115·340
	1974–75	I	3,012·95	..	..	..	..	..	..	..	..	..	..	273·905

ABSTRACT.

		Average revenue per rotation.	*Yield per rotation in tonnes.*
Couper I	..	9 804·59	355·880
Coupe II	..	12 876·00	368·872
Coupe III	..	4669·95	167·292

Name of coupe (1)	*Year of working* (2)	*Coupe No.* (3)	*Revenue Rs.* (4)	*Peruvarai* (5)	*Siruvarai* (6)	*Split* (7)	*Dokku* (8)	*Varai* (9)	*Thadukku* (10)	*Karanai* (11)	*Enikkal* (12)	*Vittam* (13)	*Vedar* (14)	*Total yield* (15)
16 Puliyanur Bamboo Felling Series.	1960–61	II	7 725·00	389·045	82·598	..	..	..	..	..	..	..	..	471·643
	1961–62	III	2 700·00	44·795	37·152	..	..	..	..	..	..	..	..	81·947
	1962–63	I	3 760·00	364·896	688·679	10·775	..	..	..	..	..	..	..	1 064·350
	1963–64	II	6 000·00	355·580	225·944	..	..	..	..	..	..	..	..	581·524
	1964–65	III	4 010·00	32·300	2·451	..	..	..	..	..	..	..	..	34·751
	1965–66	I	9 000·00	126·667	6·849	..	..	..	..	..	..	..	..	133·516
	1966–67	II	14,000·00	451·435	106·683	..	..	..	..	..	..	..	..	558·118
	1167–68	III	6,715·00	10·880	7·288	..	..	..	..	..	..	..	..	18·168
	1968–69	I	9,535·00	95,463	15,744	..	..	..	..	..	..	..	..	111·207

	1969–70	II	8,120·00	..	0·516	..	..	..	..	..	..	..	..	0·516
	1970–71	III	15,030·00	191·267	12·964	..	..	..	..	..	..	..	..	204·231
	1971–72	I	9,010·00	62·007	11,542	4·550	..	0·943	..	..	..	..	..	79·042
	1972–73	II	9,500·00	..	129·903	..	..	..	..	..	..	..	..	129·903
	1973–74	III	5,200·00	..	..	..	..	..	..	..	..	..	..	32·650. Paper mill.
	1974–75	I	3,450·90	..	..	..	..	..	..	..	..	..	..	313·723 Paper mill.

ABSTRACT.

		Average revenue per rotation.	*Yield per rotation in tonnes.*
Coupe I	..	8,951·18	340·368
Coupe II	..	9,069·00	348·340
Coupe III	..	6,731·00	74·349

17 Singarapet Bamboo Felling Series.	1960–61	II	910·00	311·372	39·331	13·488	..	..	..	..	..	..	..	364·191
	1961–62	III	2,420·00	150·492	44·634	..	..	..	..	..	..	..	..	195·126
	1962–63	I	2,000·00	..	..	..	..	..	..	..	12·312	..	..	12·312
	1963–64	II	1,145·00	75·854	99·646	..	..	..	..	..	..	..	..	175·500
	1964–65	III	3,505·00	32·852	..	..	..	..	..	..	..	..	..	32·852
	1965–66	I	3,805·00	67·864	..	..	0·786	..	..	0·912	..	..	..	69·562
	1966–67	II	1,810·00	..	—	..	..	..	..	..	..	..	..	100·000 Paper mill
	1967–68	III	8,000·00	102·638	23·349	..	..	..	..	..	..	..	..	125·987
	1968–69	I	2,625·00	62·305	19,866	..	..	..	..	..	..	..	..	82·171
	1969–70	II	3,175·00	22·950	26·832	..	..	..	..	..	..	..	..	49·782
	1970–71	III	5,155·00	19,329	7,833	5·331	..	..	..	..	..	..	..	32·498
	1971–72	I	3,150·00	33,643	16,037	..	..	..	..	..	..	..	..	49·680
	1972–73	II	2,150·00	248·710	..	..	..	..	..	..	..	..	..	248·710
	1973–74	III	Sale dropped in Conservator of Forests No 27170/72, L, dated 17th June 1973							..	..	..	..	..
	1974–75	I	369·90	..	..	..	..	..	..	..	..	..	..	33·630 Paper mill.

ABSTRACT.

		Average revenue rotation	*Yield per rotation in tonnes.*
Coupe I	..	2,389·98	49,471
Coupe II	..	1,838·00	187·636
Coupe III	..	3,816·00	77,291

APPENDI XXVIII—*cont.*

Name of Coupe.	*Year of working.*	*Coupe No.*	*Revenne Rs.*	*Yield in each varieties in tonne.* *Peruvaral.*	*Siruvarai.*	*Split.*	*Dokku.*	*Varai.*	*Thadukku.*	*Karanai.*	*Enikkal.*	*Vittam.*	*Vedar.*	*Total yield.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
18 Nadukuppam Bamboofelling Series.	1960–61	II	2265·00	79·526	32·999	6·861	..	..	..	..	..	..	..	119·386
	1961–62	III	3,500·00	..	14·944	11·170	..	..	..	..	..	..	..	156·114
	1962–63	I	1,170·00	348·126	268·490	..	..	..	..	..	..	..	..	616·616
	1963–64	II	11,010·00	221·093	581·970	..	..	709·750	..	..	..	..	..	1,512·813
	1964–65	III	7,200·00	..	35·810	2·928	..	..	..	..	..	..	..	38·738
	1965–66	I	3,505·00	1,74·445	6·949	..	..	..	..	..	..	..	..	181·395
	1966–67	II	22,010·00	171·615	34·185	..	2·010	..	0·135	0·347	..	0·493	1·002	209·787
	1967–68	III	5,005·00	..	..	..	..	..	..	..	..	..	..	200·000
	1968–69	I	2,700·00	12·708	27·864	..	..	..	..	..	..	..	..	40·572
	1969–70	II	Sale dropped in Conservator of Forests No. 33258/68, L., dated 12th October 1969.								..	..	..	
	1970–71	III	13,170·00	177·880	21·595	2·826	4·951	..	..	..	..	0·134	0·903	208·289
	1971–72	I	4,500·00	6·843	141·435	9·760	0·282	..	..	..	..	..	..	158·320
	1972–73	II	Sale dropped in Conservator of Forests No. 29997/71, L., dated 23rd November 1972.								..	..	..	..
	1973–74	III	1 066·95	..	..	..	..	..	..	..	..	..	..	Paper Mill
	1974–75	I	3,194·10	..	..	..	..	..	..	..	..	..	..	Paper mill.

ABSTRACT.

		Average revenue per rotation.	*Yield per rotation in Tonnes.*
Coupe I	..	3,013·82	249·226
Coupe II	..	7,057·00	368·400
Coupe III	..	5,988·39	150·785

19 **Malaitirupathur Bamboo felling series.**	1960–61	II	Sale dropped in Conservator's No. 2507/60 A, dated 16th September 1960.											
	1961–62	III	5,560·00	376·312	7·156	..	..	..	..	..	..	..	..	383·468
	1962–63	I	3,201·00	..	43·789	..	..	..	..	..	..	..	..	43·789
	1963–64	II	4,010·00	37·629	141·410	..	..	..	..	..	..	..	..	179·039
	1964–65	III	6,500·00	195·840	18·060	..	134·540	..	..	..	..	..	..	348·440

		1965–66	I	5,310·00	133·025	..	..	..	..	..	..	..	..	..	348·440
		1966–67	II	4,050·00	57·163	43·215	..		..	..	..	..	..	..	133·025
		1967–68	III	11,510·00	90·840	6·051	..	21·010	..	..	..	..	..	..	102·388
		1968–69	I	4,210·00	44·625	7·998	0·256	..	..	..	..	..	..	..	93·891
		1969–70	II	4,050·00	..	3·999	16·982	..	..	..	..	..	..	..	52·879
		1970–71	III	240·00	0·680	0·748	..	..	..	..	..	..	..	..	20·981
		1971–72	I	4,235·00	10·625	..	0·427	..	..	..	..	..	..	..	1·428
		1972–73	II	9,960·00	..	..	..	..	..	..	..	7·084	..	..	18·137
		1973–74	III	..	..	..	..	..	..	..	..	..	..	..	.. Yield Nil.
		1974–75	I	Sale dropped in C.F's No. 26988/73, L., dated 16th May 1974.						..	..	..	..	..	Paper mill.

ABSTRACT.

		Average Revenue per rotation.	*Average yield per rotation in tonnes.*
Coupe I	..	3,391·20	45·566
Coupe II	..	4,414·00	60·482
Coupe III	..	4,762·00	166·045

20 Puliyur series.	Bamboo felling	1960–61	II	6,005·00	Yield figure not available in the register.				..	..	..	..	..	..	..
		1961–62	III	3,010·00	170·000	5·444	..	..	..	..	..	..	..	..	175·444
		1962–63	I	4,010·00	407·201	348·212	..	..	..	..	..	..	..	..	755·413
		1963–64	II	12,170·00	173·927	48·362	..	..	..	..	..	..	..	..	222·289
		1964–65	III	3,510·00	113·263	..	..	0·970	..	0·016	0,308	..	0·845	0·052	115·404
		1965–66	I	5,510·00	442·383	3·930	..	..	..	..	..	..	..	..	446·313
		1966–67	II	..	..	..	..	..	..	..	..	..	..	..	Lease cancelled.
		1967–68	III	6,000·00	260·789	2·084	..	0·120	14·867	..	..	..	..	..	295·860
		1968–69	I	1,000·00	40·086	3·731	..	..	..	..	..	..	..	..	43·817
		1969–70	II	..	Sale dropped in C.F.'s No. 33258/68, L., dated 12th October 1969.								..	..	
		1970–71	III	15,030·00	191·267	12·967	..	..	..	..	..	..	..	..	..
		1971–72	I	10,500·00	45·535	34·237	..	..	..	..	..	..	..	..	202·234
		1972–73	II	..	..	..	..	Sale dropped in C.F.'s No. 29997/71, L., dated 23rd November 1972.						..	79·772
		1973–74	III	..		..	..	Sale dropped in C.F. s No. 27170/72, L., dated 17th June 1973.						..	
		1974–75	I	511·60	..	..	..	..	..	..	..	..	..	..	46·510 Paper mill.

ABSTRACT.

	Average revenue per rotation.	*Average yield per rotation in tonne.*
Coupe I	6.106.32	274.365
CoupeII ..	3.235,00	44·458
CoupeIII :	5,510,00	158·188

APPENDIX XXVIII—*cont.*

Name of Coupe.	Year of working.	Coupe No.	Revenue Rs.	Yield in each varieties in tonne.			Dokku.	Varai.	Thadnkku.	Karanai.	Enikkal.	Vittam.	Vedar.	Total yield.
				Peruvaral.	Siruvarai.	Split.								
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
V. *Alangayam Range*—	1960–61	II	Sale dropped in Conservator of Forests No. 2507/60 Dated 16–9–60.				..	..	..	..	..	..	..	.
21. Mangalam bamboo felling series.	1961–62	III		Do.				..	..	..	..	..	..	..
	1962–63	I		Do.			..	..	..	..	..	..	..	..
	1963–64	II		Do.			..	..	..	..	..	..	..	..
	1964–65	III	1,700·00	20·783	7·882	..		..	..	..	..	..	..	28·665
	1965–66	I	Sale dropped Conservator's No. 781/65 A, dated 5–7–65.				..	..	..	..	..	..	..	..
	1966–67	II	345·00	221·935	44·866	0·065	2·511	..	..	..	..	..	..	269·377
	1967–68	III	610·00	..	25·181	..	3·720	..	..	..	..	..	..	28·901
	1968–69	I	320·00	..	16·148	..	..	..	..	..	..	..	..	16·148
	1969–70	II	155·00	17·147	..	0·412	..	..	..	..	..	..	..	17·829
	1970–71	III	585·00	..	..	0·170	0·983	..	..	..	..	..	..	1·153
	1971–72	I	330·00	3·400	0·645	..	..	..	..	..	..	..	..	4·045
	1972–73	II	155·00	3·400	0·516	..	..	..	..	..	..	..	..	3·916
	1973–74	III	Sale dropped.		..	..	..	..	..	..	..	..	..	..
	1974–75	I	465·00	21·377	2·580	..	..	..	..	..	..	..	..	23·957

ABSTRACT.

	Average revenue per rotation.	Yield per rotation in tonnes.
Coupe I	223·00	8·830
Coupe II ..	131·00	58·224
Coupe III	579·00	11·744

22. Nagaluthu Bamboo Felling Series.	1960–61	II	Sale dropped in Conservator of Forests No. 2507/60 A, Dated 16–9–60.				..	..	..	..	..	..	..	..
	1961–62	III	Do.				..	..	..	..	..	..	..	..
	1962–63	I	Do.				..	..	..	..	..	..	..	..
	1963–64	II	Do.				..	..	..	..	..	..	..	..
	1964–65	III	..		..	..	..	..	..	..	..	..	..	..
	1965–66	I	310·00	..	..	4·218	..	Mangalam, Yelagiri and Nagaluthu BC are sold as one unit.						4·218
	1966–67	II	..	..	..	..	..	.. Sold along with Mangalam and Elegiri BC.					..	..
	1967–68	III	405·00	..	..	2·541	..	..	..	..	..	..	..	2·514
	1968–69	I	220·00	..	..	4·428	..	..	..	..	..	..	..	4·428
	1969–70	II	155·00	5·100	..	0·113	..	..	..	..	..	..	..	5·213
	1970–71	III	445·00	..	1·396	..	..	..	..	..	..	..	..	1·396
	1971–72	I	275·00	2·125	0·323	..	..	..	..	..	..	..	..	2·448
	1972–73	II	155·00	1·700	0·516	..	..	..	..	..	..	..	..	2·216
	1973–74	III	Sale dropped	..	..	..	..	..	..	..	..	..	..	..
	1974–75	I	325·00	10·565	2·000	0·273	..	..	..	..	..	..	..	12·838

ABSTRACT.

	Average revenue per rotation.	Yield per rotation in tonnes.
Coupe I	226·00	4·786
Coupe II	62·00	1·486
Coupe III	170·00	0·787

23. Yelagiri Bamboo felling Series.	1960–61	II	Sale dropped.		..	..	..	..	..	..	..	..	..	..
	1961–62	III	Do.				..	..	..	..	..	..	..	..
	1962–63	I	Do.		..	..		..	..	..	..	..	..	..
	1963–64	II	Do.		..	..	..	..	..	..	..	..	..	..
	1964–65	III	..		..	..	..	..	..	..	..	..	..	..
	1965–66	I	Sale dropped in Conservator's No. 701/65, dated 5–7–65				..	.. Sold along with Mangalam and Nagaluthu BC.					..	..
	1966–67	II	..	..	..	..	..	..	..	Sold along with Mangalam and Nagaluthu BC.				
	1967–68	III	715·00	..	2·567	..	..	..	..	..	..		..	2·567
	1968–69	I	205·00	..	0·903	..	..	..	..	..	..	..	..	0·903
	1969–70	II	155·00		4·752	0·224	..	..	..	..	..	..	..	4·976

APPENDIX XXVIII—*cont.*

Name of Coupe.	*Year of working.*	*Coupe No.*	*Revenue Rs.*	*Yield in each varieties in tonne.* *Peruvaral*	*Siruvarai.*	*Split.*	*Dokku.*	*Varai.*	*Thadukku.*	*Karanai.*	*Enikkal.*	*Vittam.*	*Vedar.*	*Total yield.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	1970–71	III	Sale dropped in Conservator's No.33207/69 L, Dated 15-5-71.				..	..	..	..	..	..	..	..
	1971–72	I	Sale dropped in Conservator's No. 30417/70 L, Dated 15-5-71.				..	..	..	..	..	..	..	..
	1972–73	II	Sale dropped in Conservator's No. 29997/71 L, Dated 23-11-72.				..	..	..	..	..	..	..	..
	1973–74	III	Sale dropped in Conservator's No. 27170/72 L, Dated 17-6-73.				..	..	..	..	..	..	..	..
	1974–75	I	Sale dropped in Conservator's No. 26998/73 L, Dated 16-5-74.				..	..	..	..	..	..	..	..

ABSTRACT.

	Average revenue per rotation.	*Yield per rotation in tonnes.*
Coupe I	41·00	0·180
Coupe II	31·00	0·995
Coupe III	143·00	0·513

Name of Coupe.	*Year of working.*	*Coupe No.*	*Revenue Rs.*	*Peruvaral*	*Siruvarai.*	*Split.*	*Dokku.*	*Varai.*	*Thadukku.*	*Karanai.*	*Enikkal.*	*Vittam.*	*Vedar.*	*Total yield.*
24. Alangayam Bamboo felling series.	1960–61	II	Sale dropped in Conservator's No. 2507/60 L, Dated 16-9-60.				..	..	..	..	..	..	..	..
	1961–62	III	2710·00	8·577	0·658	..	0·434	..	..	..	..	0·560	..	10·229
	1962–63	I	1555·00	216·223	..	0·756	1·972	..	..	..	0·060	1·800	..	220·811
	1963–64	II	3505·00	107·279	..	..	0·094	..	0·073	..	..	0·165	..	107·611
	1964–65	III	4250·00	157·038	7·468	..	3·461	..	..	..	..	..	..	167·967
	1965–66	I	1595·00	67·320	18·073	1·220	0·688	..	..	..	..	1·131	..	88·432
	1966–67	II	3550·00	43·036	19·156	..	..	..	..	..	..	..	..	62·192
	1967–68	III	3700·00	98·115	..	..	110·887	..	0·048		5·025	2·594	..	216·669
	1968–69	I	Sale dropped in Conservator's No. 33105/67, dated 9-12-68.				..	..	..	..	..	..	..	..
	1969–70	II	4020·00	59·134	32·572	..	..	..	..	..	..	..	..	91·706

	1970–71	III	4100·00	40·400	59·650	..	..	..	..	..	..	..	..	100·050
	1971–72	I	1750·00	78·625	14·383	..		..	..	..	..	..	..	93·008
	1972–73	II	Sale dropped in Conservator's No. 29997/71 dated 23–11–72.				..	..	..	..	..	..	..	..
	1973–74	III	Sale dropped in Conservator's No. 26170/72 L, Dated 17–6–73.											
	1974–75	I	1905·00	..	9·011	..	..	..	0·052	..	..	..	..	9·063

ABSTRACT.

	Average revenue per rotation.	*Yield per rotation in tonnes.*
Coupe I ..	1361·00	82·263
Coupe II	2215·00	52·302
Coupe III	2952·00	98·983

25. Mandarakuttai bamboo felling series.	1960–61	II	1900·00	4·641	3·367	45·019	0·112	..	..	..	..	**9·369**	..	62·508
	1961–62	III	2000·00	21·122	13·773	32·879	0·446	..	0·439	..	0·678	38·007	..	107·344
	1962–63	I	1500·00	13·209	93·242	47·580	0·403	..	0·004	..	..	20·686	..	175·124
	1963–64	II	7010·00	18·488	..	1·865	0·463	..	0·308	..	..	6·131	..	27·258
	1964–65	III	3860·00	54·970	97·297	3·283	6·907	..	..	..	..	41·071	..	203·528
	1965–66	I	3905·00	80·002	10·249	..	5·037	..	0·037	..	2·165	13·033	..	110·793
	1966–67	II	7100·00	193·171	127·078	7·037	..	..	0·262	..	..	..	..	327·548
	1967–68	III	8600·00	57·681	..	41·180	11·799	..	..		0·925	23·646	..	135·231
	1968–69	I	4055·00	46·410	51·786	..	4·290	..	..	..	..	6·642	..	89·128
	1969–70	II	6050·00	65·722	44·918	..	..	..	..	..	..	..	..	110·640
	1970–71	III	..	..	..	..	..	..	..	..	..	Departmental Collection		
	1971–72	I	3600·00	43·367	80·922	..	..	..	..	..	..	..	..	124·289
	1972–73	II	6775·00	8·670	38·777	..	..	..	..	..	..	..	..	47·447
	1973–74	III	6200·00	51·867	62·668	..	6·832	..	..	..	..	..	..	121·367
	1974–75	I	5300·00	12·495	102·491	..	..	..	0·026	..	..	..	..	**115·012**

ABSTRACT

	Average revenue per rotation.	*Yield per rotation in tonnes.*
Coupe I	3672·00	122·869
Coupe II	5767·00	115·080
Coupe III ..	**4132·00**	113·494

APPENDIX XXVIII—*cont*.

Name of Coupe.	*Year of working.*	*Coupe No.*	*Revenue Rs.*	*Yield in each varieties in tonnes.* *Peruvaral.*	*Siruvarai.*	*Spiit.*	*Dokku.*	*Varai.*	*Thadukku.*	*Karanai.*	*Enikkal.*	*Vittam.*	*Vedar.*	*Total yield.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
26. Pungulam Bamboo felling series.	1960–61	II	900·00	4·165	..	5·136	1·531	..	1·703	..	..	0·238		12·773
	1961–62	III	5010·00	231·353	58·046	40·298	23·133	..	0·024	..	..	14·059	..	366·913
	1962–63	I	6930·00	62·900	15·996	3·414	24·413	..	..	..	17·420	15·779	..	139·922
	1963–64	II	2055·00	34·722	..	5·490	5·673	..	0·359	..	..	8·837	..	55·081
	1964–65	III	2701·00	61·013	..	..	18·910	..	..	..	..	38·730	..	118·653
	1965–66	I	7575·00	90·525	6·192	..	..	..	..	..	..	0·003	..	96·720
	1966–67	II	2060·00	12·180	32·714	3·416	10·515	..	..	..	..	33·140	..	91·965
	1967–68	III	3340·00	84·048	61·146	..	10·726	..	0·344	..	..	56·818	..	213·082
	1968–69	I	6630·00	5·100	11·300	..	..	..	..	..	..	..	..	16·400
	1969–70	II	Sale dropped in Conservator of Forests No. 33258/68 dated 2–10–69.				..	..	..	..	..	..	..	..
	1970–71	III	5500·00	56·593	80·690	..	..	..	..	..	..	..	..	137·283
	1971–72	I	7600·00	185·394	96·937	..	..	..	..	..	..	..	..	282·331
	1972–73	II	10000·00	6·877	14·035	..	..	..	..	..	..	..	..	20·912
	1973–74	III	6450·00	38·913	46·440	..	..	..	..	..	..	..	..	85·353
	1974–75	I	7600·00	55·505	155·871	..	..	..	..	..	..	5·432	..	216·808

ABSTRACT.

	Average revenue per rotation.	*Yield per rotation in tonnes.*
Coupe I ..	7267·00	150·436
Coupe II ..	3003·00	36·146
Coupe III ..	4600·00	184·257

27. Nayakkanur bamboo felling series.	1960–61	II	1525·00	0·935 ..	18·593	1·078	..	..	0·650	..	..	5·478	..	26·734
	1961–62	III	2010·00	122·468	49·349	..	0·989	..	0·485	..	0·047	6·158	..	179·496

1962–63	I	1300·00	45·696	..	10·321	0·691	..	0·238	..	16·000	6·675	..	79·621
1963–64	II	5005·00	22·491	3·382	..	1·206	..	0·605	..	..	3·213	..	30·897
1964–65	III	1501·00	25·678	34·811	..	4·805	..	..	..	..	13·270	..	78·564
1965–66	I	1525·00	10·659	..	..	0·360	..	..	..	..	20·334	..	31·353
1966–67	II	5010·00	0·935	8·630	..	30·712	..	0·028	..	0·923	20·069	..	61·297
1967–68	III	3250·00	27·498	79·630	5·246	4·166	..	..	..	..	4·071	..	120·343
1968–69	I	1905·00	273·244	179·070	..	..	..	..	..	..	2·912	..	455·206
1969–70	II	4400·00	139·689	70·589	..	..	..	..	..	..	..	..	210·278
1970–71	III	4710·00	135·609	103·996	..	..	..	..	..	..	..	..	239·605
1971–72	I	2000·00	93·236	119·273	..	..	..	..	..	..	..	..	212·509
1972–73	II	5400·00	32·003	66·422	..	..	..	..	..	..	..	..	98·425
1973-74	III	Sale dropped in Conservator's No. 27170/72 L. dated 17–6–73.				..	..	..	..	..	..	..	..
1974–75	I	2400·00	8·925	23·156	..	..	..	..	..	..	..	..	32·081

ABSTRACT.

		Average Revenue per rotation.	Yield per rotation in tonnes.
Coupe I ..	..	1826·00	162·154
Coupe II ..	..	4268·00	85·526
Coupe III	..	2296·20	123·601

APPENDIX XXIX.

Statement of Total yield and rate per hectare obtained from sale of Fuel Coupes from 1961–62 to 1975–76.

Sathanur Range.

Year of Felling.	*Coupe number.*	*Ponnlar East F. F. S.*		
		Area in hectare.	*Yield in tonnes.*	*Revenue per hectare.*
(1)	(2)	(3)	(4)	(5)
1961–62	XXX	41·27	443·990	374·44
1962–63	XXXI	49·56	175·770	180·31
1963–64	XXXII	42·08	194·000(AV)	41·99
1964–65	XXXIII	38·45	265·000	133·38
1965–66	XXXIV	48·96	179·770	165·49
1966–67	XXXV	53·82	237·740	167·96
1967–68	XXXVI	53·42	270·000	151·00
1968–69	XXXVII	38·85	96·000	149·00
1968–69	..	..	..	..
1969–70	..	..	..	..
Do.	..	..	..	..
1970–71	..	..	..	..
Do.	..	..	..	..
1971–72	XXXVIII	38·40	36·000	52·00
Do.	XXXIX	40·10	95·000	56·00
Do.	XL	30·30	195·750	101·00
1972–73	..	..	..	..
1973–74	..	..	..	..
1974–75	..	..	..	..
1975–76	I	37·80	174·000(AV)	175·00
Total Yield realised for the entire series		513·01	2,363·020	..
Average Yield per hectare		..	4·606	..

APPENDIX XXIX—*cont.*

Sathanur Range—cont.

Year of Felling.	*Coupe number.* (6)	*Ponniar West F.F.S.* *Area in hectare.* (7)	*Yield in tonnes.* (8)	*Revenue per hectare.* (9)	*Remarks.* (10)
1961–62	XXIV	27·51	143·400 (AV)	397·67	
1962–63	XXV	23·87	122·930	202·54	
1963–64	XXVI	14·56	75·880 (AV)	180·31	
1964–65	XXVII	26·30	81·000	249·47	
1965–66	XXVIII	15·78	127·000	395·20	
1966–67	XXIX	25·90	118·870	275·17	AV— Actual Yield not known. Hence average yield is furnished.
1967–68	..	..	..	..	Do.
1968–69	..				Do.
1968–69	XXXI	24·30	122·000	238·00	
1969–70	XXX	24·70	192·000	232·00	
Do.	..	..	..	..	
1970–71	XXXIII	28·33	167·500	253·00	
Do.	..	..	..	..	
1971–72	XXXII	10·90	48·000	81·00	
Do.	XXXIV	26·00	110·500	90·00	
Do.	..	..	..	..	
1972–73	..	..	..	..	
1973–74	..	..	..	..	
1974–75	..	..	..	..	
1975–76	XXXV	22·00	114·700 (AV)	500·00	
Total yield realised for the entire series		270·15	1,089·800	..	
Average yield per hectare		..	4·03	..	

Sathanur Range—cont.

Year of Felling.	Coupe number.	Sorapanandal F.F.S.		
		Area in hectare.	Yield in tonnes.	Revenue per hectare.
	(11)	(12)	(13)	(14)
1961–62	XXV	15·37	149·750	358·15
1962–63	XXVI	17·80	71·480(AV)	160·55
1963–64	XXVII	20·63	171·000	125·97
1964–65	I	35·61	212·000	212·42
1965–66	II	30·35	135·130	113·62
1966–67	III	36·42	124·000	224·77
1967–68	IV	32·00	105·000	151·00
1968–69	V	30·80	83·500	153·00
1969–70	VI	35·20	94·000	100·00
1370–71	VII	36·00	25·000	141·00
1971–72	VIII	39·40	158·200(AV)	141·00
1972–73	..	..	..	..
1973–74	..	..	..	..
1974–75	..	..	..	..
1975–76	IX	29·50	118·500(AV)	585·00
Total yield realised for entire series		359·08	1,442·560	..
Average yield per hectare		..	4·016	..

Sathanur Range—cont.

Year of Felling.	*Coupe number.*	*Beemarapatti F.F.S.*			*Remarks.*
		Area in hectare.	*Yield in tonnes.*	*Revenue per hectare.*	
	(15)	(16)	(17)	(18)	(19)
1961–62	XIII	30·75	732·530	889·20	
1962–63	XIV	28·73	549·650	864·50	
1963–64	XV	34·39	518·160	681·72	
1964–65	I	..	..	..	
1965–66	..	..	..	..	
1966–67	..			..	
1967–68	..	..	..	..	
1968–69	..	..	..	..	
1969–70	..	..	..	..	
1970–71	..	..	..	..	
1971–72	..	..	..	..	
1972–73	..	..	..	..	
1973–74	..	..	..	..	
1974–75	..	..	..	..	
1975–76	..	..	..	..	
Total Yield realised for entire series		93·87	1,800·340	..	
Average Yield per hectare		..	19·153	..	

Sathanur Range—cont

Year of felling.	Coupe. number (20)	Swamimalai F.F.S. Area in hectare. (21)	Yield in tonnes. (22)	Revenue per hectare. (23)
1961-62	XIII	16·18	289·560	286·52
1962-63	XIV	20·63	120·900	395·20
1963-64	XV	16·59	184·900(AV)	184·75
1964-65	I	18·61	185·000	343·33
1965-66	II	16·99	463·300	370·50
1966-67	III	9·02	220·000	375·40
1967-68	IV	17·80	180·000	351·00
1968-69	V	17·00	75·000	313·00
1969-70	VI	17·80	142·000	280·00
1970-71	VII	17·40	149·000	207·00
1977-72	VIII	16·50	160·000	200·00
1972-73	..	..	..	..
1973-74	..	..	..	..
1974-75	..	..	..	..
1975-76	IX	14·10	157·200(AV)	460·00
Do.	..	..	..	..
Total yield realised for the entire series		208·62	2,326·860	..
Average yield per hectare		..	11·15	..

Year of felling	Coupe number (24)	Royandapuram F F S Area in hectare (25)	Yield in in tonnes (26)	Revenue per hectare (27)	Remarks (28)
1961-62	XXIII	12·94	332·230	297·88	
1962-63	XIX	13·35	203·200	491·53	
1963-64	XX	10·11	108·000	368·03	
1964 65	I	16·99	132·000	566·00	
1965-66	II	16·59	419·600	506·35	Average actual yield is not known Hence Average yield is furnished.
1966-67	III	18·61	182·000	786·17	
1967-68	IV	16·20	375·000	650·00	
1968-69	V	15·40	214·000	450·00	
1969-70	VI (part)	9·20(part)	46·000	305·00	
1970-71	VII	16·20	117·500	170·00	
1971-72	VII	15·40	70·500	132·00	
1972-73	..	..	..	..	
1973-74	..	..	..	..	
1974-75	..	..	..	..	
1975-76	IX	15·20	209·300 (AV)	1,025·00	
Do.	VI (Part)	7·40(part)	117·500	1,251·00	
Total yield realised for the entire series	..	183·59	2,526·830	..	
Average yield per hectare	..	..	13·770		

Sathanur Range—cont.

Year of felling.	coupe number. (29)	*Xeppur East F.F.S.*		
		Area in hectare. (30)	Yield in tonnes. (31)	Revenue per hectare. (32)
1961 62	XXII	14·56	273·300	432·25
1962–63	XXIII	19·02	212·340	288·99
1963–64	XXIV	17·80	196·500(AV)	247·00
1964–65	I	26·71	96·520	390·60
1965–66	II	21·45	553·720	432·25
1966–67	III	22·66	375·920	657·02
1967–68	..	..	..	..
1968–69	..	..	..	..
1969–70	VI	22·66	199·500	281·00
1970–71	VII	29·14	179·000	231·00
1971–72	IV and V	48·10	186·000	152·00
1971–72	VIII	22·80	108·000	128·00
1972–73	..	..	..	..
1973–74	..	..	..	..
1974–75	..	..	..	..
1975–76	IX	21·80	240·700(AV)	425·00
Total yield for the entire series		266·70	2,621·500	..
Average yield per hectare		..	9·83	..

Sathanur Range—cont.

Year of Felling.	Coupe number.	Veppur West F.F.S.			Remarks.
		Area in hectare.	Yield in tonnes.	Revenue per per hectare.	
	(33)	(34)	(35)	(36)	(37)
1961–62	XIII	24·28	598·420	214·89	
1962–63	XIV	31·16	300·740	348·27	
1963–64	XV	32·37	522·220	227·24	
1964–65	I	28·73	162·560	534·37	
1965–66	II	33·99	762·000	691·60	
1966–67	III (part)	19·00	217·600	617·50 (A.V.)	
1967–68	III (part)	7·30	83·580 (A.V.)	750·00	
1968–69	V	28·30	182·000	500·00	
1969–70	VI	29·14	235·000	345·000	
1970–71	VII	31·20	316·000	251·00	
1971–72	IV	31·60	285·000	140·00	
1971–72	VIII	34·80	142·000	104·00	
1972–73	..	..	..	..	
1973–74	..	..	..	..	
1974–75	..	..	..	..	
1975–76	IX	33·90	388·300 (A.V.)	465·00	
Total Yield for the entire series		365·77	4,195·420	..	
Average Yield per hectare		..	11·470	..	

Sathanur Range—cont.

Year of felling.	Coupe number.	*Reddiapalayam F.F.S.* Area in hectare.	Yield in tonnes.	Revenue per hectare.
	(38)	(39)	(40)	(41)
1961–62	XVII	29·13	834.130	214·80
1962–63	XVIII	36·42	427·730	338·39
1963–64	XIX	40·06	779·60(AV)	296·40
1964–65	I	30.35	341·370	247·10
1965–66	II	30·35	816·000	731·12
1966–67	III	38·45	1,250.000	1,235·00
1967–68	IV	23·88(part)	325·000	1875·00
1968–69	V	30·40	1,096.000	790·00
1969–70	VI	32·00	565·000	576·00
1970–71	VII	32.80	335·000	440·00
Do.	..	..	..	..
1971–72	VIII	35·00	443·500	335·00
1972–73	..	..	..	
1973–74	..	..	..	..
1974–75	..	..	..	..
1975–76	IX	33·10	644·430(AV)	1,390·00
Total Yield for the entire series		391·94	7,857·960	..
Average Yield per hectare		..	20·06	..

Sathanur Range—cont.

Year of Felling	*Coupe number.* (42)	*Chinnayampettai F.F.S.* *Area in hectare.* (43)	*Yield in tonnes.* (44)	*Revenue per hectare.* (45)	*Remarks.* (46)
1961–62	..	..	..	..	
1962–63	..	..	..	..	
1963–64	..	..	..	..	
1964–65	I	16·59	277·000	993·59	
1965–66	II	15·37	386·000	494·00	
1966–67	III	15·78	449·000	1,733·94	
1967–68	IV	17·40	405·000	1,168·00	
1968–69	V	16·20	38·250	281·00	
1969–70	VI (part)	8.10	25.000	361·000	
1970–71	VI (part)	8·90	75·750	195·00	
Do.	VII	17·80	98·000	205·00	
1971–72	VIII	15.20	50·000	200.00	
1972–73	..	..	..	..	
1973–74	..	..	..	..	
1974 75	..	..	.		
1975–76	IX	16·00	219·500	710·00	
Total Yield for the entire series		147·34	2,023·500	..	
Average Yield per hectare		..	13·733	..	

Chengam Range.

Year of felling.	*Coupe number.* (47)	*Anandavadi East F.F.S.* *Area in hectare.* (48)	*Yield in tonnes.* (49)	*Revenue per hectare.* (50)
1961–62	XXVI	40·47	629·900	296·00
1962–63	..	..	..	..
1963–64	XXVII	49·37	180·800	91·00
Do.	XXVII	46·54	553·700	128·00
1964–65	I	40·50	409·000	338·00
1965–66	II	38·04	541·500	336·00
1966–67	..	..	..	..
1967–68	..	..	..	..
1968–69	V	39·70	361·500	355·00
1969–70	VI	40·87	161·000	231·00
1970–71	VII	40·09	228·750	131·00
1971–72	III IV	42·90 27·90	304·000	183·00
Do.	VII	43·90	349·000	125·00
Total Yield for the entire series		449·34	3,719·150	
Average Yield per hectare			8.2	

Chengam Range—cont.

Year of felling.	*Coupe number.*	*Anandavadi West F.F.S.* *Area in hectare.*	*Yield in tonnes.*	*Revenue per hectare.*	*Remarks.*
	(51)	(52)	(53)	(54)	(55)
1961–62	XXVII	22·66	383·000	531·00	
1962–63	XXVIII	35·61	561·800	383·00	
1963–64	XXIX	22·66	232·800 (AV.)	138·00	
Do.	..	..	..	..	
1964–65	I	37·23	360·000	568·00	
1965–66	II	29·13	451·100	371·00	
1966–67	III	35·61	518·100	516·00	
1967–68	IV	36·00	241·500	551·00	
1968–69	V	32·80	128·500	411·00	
1969–70	VI	32·80	161·000	216·00	
1970–71	VII	33·60	281·500	301·00	
1971–72	VIII	33·30	320·000	355·00	
Do.	..	..	..	..	
Total Yield for the entire series		351·40	3,639·300	..	
Average Yield per hectare		..	10·3	..	

Chengam Range—cont.

Year of felling.	*Coupe number.*	*Mudanai F.F.S.* *Area in hectare.*	*Yield in tonnes.*	*Revenue per hectares.*
	(56)	(57)	(58)	(59)
1961–62	XX	41·27	776·200	398·00
1962–63	XXI	42·08	647·100	372·00
1963–64	XXII	42·49	583·200(Av.)	284·00
1964–65	I	35·61	539·000	329·00
1965–66	II	33·60	529·100	929·00
1966–67	III	31·60	655·300	990·00
1967–68	IV	42·50	605·000	706·00
1968–69	V	37·60	351·000	481·00
1969–70	VI	39.70	257.000	482.00
1970–71	VII	36·80	392·000	416·00
1971–72	VIII	36·40	424·000	703·00
Total Yield for the entire series		419·65	5,758·900	
Average Yield per hectare		..	13·73	..

Chengam Range—cont.

Year of felling.	Coupe number. (60)	Ravandavadi F.F.S. Area in hectare. (61)	Yield in tonnes. (62)	Revenue per hectare. (63)	Remarks. (64)
1961–62	XIV	42·08	804·900	620·00	
1962–63	XV	38·44	866·600	820·00	
1963–64	XVI	44·51	820·800 (Av.)	247·00	
1964–65	XVII	42·89	600·000	741·00	
1965–66	XVIII	39·25	532·300	301·00	
1966–67	XIX	36·01	884·900	743·00	
1967–68	XX	19·40	376·000	686·00	
1968–69	XXI	39·70	516·000	500·00	
1969–70	XXII	33·60	671·000	435·00	
1970–71	XXIII	44·90	812·000	320·00	
1971–72	XXIV	40·20	877·000	250·00	
Total Yield for the entire series		420·98	7,761·500	..	
Average Yield per hectare		..	18·44	..	

NOTE.—Major part of the felled area in Ravandavadi F.F.S. have been proposed for raising Misc. Plantations.

Chegam Range—cont.

Year of felling.	Melchengam F. F. S.			
	Coupe No.	*area in ha.*	*Yield in tonnes.*	*Revenue per ha.*
(1)	(2)	(3)	(4)	(5)
1961–62	..	..	..	..
1962–63	..	..	..	..
1963–64	..	..	..	..
1964–65	I	14·97	261·000	230·00
1965–66	..	..	..	..
1966–67	II	16·20	301·700	445·00
	III	15·40		
1967–68	IV	14·60	168·600	461·00
1968–69	V	15·00	90·500	250·00
1969–70	VI	14·60	87·500	205·00
1970–71	VII	14·60	155·000	182·00
1971–72	VIII	12·20	105·000	362·00
1972–73	..	..	..	..
1973–74	..	..	..	..
1974–75	..	..	..	..
1974–75	..	..	..	..
1974–75	..	..	..	..
1974–75	..	..	..	..
1974–75	..	..	..	..
1974–75	..	..	..	..
	Total yield for the entire Series	117·57	1,169·300	..
	Average yield per hectare.		9·948	

Chengam Range—cont.

Year of felling	Melchengam Bits.				
	Bit No.	*area ha.*	*Yield in tonnes.*	*Revenue per ha.*	
	(6)	(7)	(8)	(9)	(10)
1961–62	..	..	..	..	
1962–63	..	..	..	..	
1963–64	..	..	..	..	
1964–65	..	..	..	..	
1965–66	..	..	..	..	
1966–67	..	..	..	..	
1967–68	..	..	..	..	
1968–69	..	..	..	..	
1969–70	..	..	..	..	
1970–71	..	..	..	..	
1971–72	..	..	..	..	
1972–73	I	64·80	163·500	71·00	
1973–74	I	..	..	..	
1974–75	II	102·30	290·000	365·00	
1974–75	III	119·20	605·000	275·00	
1974–75	IV	95·30	238·500	165·00	
1974–75	V	46·70	128·250	135·00	
1974–75	VI	90·00	690·500	220·00	
1974–75	VII	83·50	897·500	260·00	
Total yield for the entire Series.		601·80	3,012·250		
Average yield per hectare			5·005		

NOTE—:In view of clear felling entire area of Annandavadi and melchengam R. Fs. of Chengam Range for handing over to the Central State seed Farm, the Anandavadi an melchengam R. Fs. are divided into some bits namely Melchengam bits and Anandavadi bits and sold during 1972–73, 1973–74, and 1974–75 as per G.O. Ms. No. 2788; Agriculture, dated 20th, October, 1971.

Year of felling.	Anandavadi Bits.			
	Bits number.	Area in ha.	Yield in tonnes.	Revenue per ha.
(1)	(2)	(3)	(4)	(5)
1972—73	I	..	..	..
	II	108·70	70·000	30·00
	III	77·80	37·500	27·00
	IV	71·90	203·000	121·00
	V	89·80	82·000	109·00
	VI	78·90	247·000	80·00
	VII	81·20	208·000	96·00
	VIII	77·50	186·500	110·00
	IX	70·90	388·000	75·00
	X	89·70	485·000	94·00
	XI	62·00	296·000	55·00
	XII	110·60	434·500	63·00
	XIII	99·30	681·500	53·00
	XIV	90·60	250·000	51·00
	XV	120·90	232·000	55·00
972—73	XVI	102·00	497·000	240·00
	XVII	108·00	541·000	251·00
	XVIII	79·80	209·000	70·00
	XIX	82·70	148·500	70·00
	XX	126·00	564·500	78·00
	XXI	72·00	305·500	170·00
	XXII	110·00	331·00	210·00
	XXIII	68·70	207·000	70·00
	XXIV	115·20	304·500	77·00
1973—74	I	39·60	141·000	54·00
	XXV	96·10	533·000	100·00
	XXVI	152·10	1,142·000	95·000
1974—75	XXVII	62·40	364·500	96·00
	XXVIII	103·60	706·500	94·00
Total		2,548·00	9,796·000	
Grand Total			3·844	

TIRUPATHUR RANGE

Year of felling.	*Chennasamudram North F.F.S.*			
	Coupe number.	*Area in ha.*	*Yield in tonnes.*	*Revenue per ha.*
(1)	(2)	(3)	(4)	(5)
1961—62	XIX	16·18	162·500	247·00
1962—63	XX	12·94	230·400	506·00
1963—64	XXI	12·54	159·750	398·00
1964—65	I	21·04	403·000	375·00
1965—66	II	10·93	95·000	212·000
1966—67	III Part	7·69	6·000	400·00
1966—67	III Part	5·26	..	..
1967—68	IV	13·35	163·500	450·00
1968—69	V	14·57	136·000	411·00
1969—70	VI	12·95	179·000	291·00
1970—71	VII	11·74	26·250	256·00
1971—72	VIII	12·10	75·200	233·00
1971—72	..	..	..	..
Total yield realised for the entire series		151·29	1,636·600	
Average yield per hactare.			10·8	

	Singarapet F.F.S.				
	Coupe No.	*Area in hactare*	*Yield per tonnes.*	*Revenue per hactare*	
		(6)	(7)	(8)	(9)
1961—62	XXVI	21·04	792·400	573·00	..
1962—63	XXVII	11·33	292·500	408·00	..
1963—64	XXVIII	30·35	546·250	138·00	..
1964—65	I	9·71	242·000	405·00	..
1965—66	II	1902	208·000	384·00	..
1966—67	III	20·64	384·100	496·00	..
1966—67		..	..	..	..
1967—68	IV	17·81	125·700	415·00	..
1968—69	V (Part)	10·13	466·800	253·00	..
1969—70	VI	19·83	189·000	200·00	..
1970—71	VII	17·40	134·000	185·00	..
1971—72	VII	19·50	409·870	201·00	..
1971—72	V (Part)	9·70	..	..	..
Total yield realised for the entire series		206·46	3,790·620		
Average yield per hectare			18·3		

NOTE.—The whole felled coupes in Chinnasamudram North F.F.S. have been proposed for tamarind Plantation series.

Year of felling.	*Govindapuram F.F.S.*			
	Coupe No.	*Area in ha.*	*Yield in tonnes.*	*Revenue per ha.*
(1)	(2)	(3)	(4)	(5)
1961—62	XXV	13·75	266·100	257·00
1962—63	XXVI	16·59	353·500	445·00
1963—64	XXVII	9·71	227·000	309·00
1964—65	I	16·18	294·000	348·00
1965—66	II -	17·40	432·700	247·00
1966—67	III	19·82	420·500	750·00
1967—68	IV	14·16	335·000	707·00
1968—69	V	23·87	256·000	551·00
1969—70	VI	23·87	238·50	331·00
1970—71	VII	18·61	150·000	308·00
1971—72	VIII	23·00	138·000	245·00
Total yield realised for the entire series		196·96	3,111·300	
Average yield per hectare			15·7	

year of felling	*Andiappanur F.F.S.*				
	Coupe No.	*Area in ha.*	*Total yield in tonnes.*	*Revenue per ha.*	
		(6)	(7)	(8)	(9)
1961—62	XXII ..	9·71	106·100	264·00	..
1962—63	XXIII ..	15·37	127·000	301·00	..
1963—64	XXIV ..	16·18	119·500	77·00	..
1964—65	I	12·55	35·000	457·00	..
1965—66	II	16·59	188·900	99·00	..
1966—67	III	14·16	129·000	496·00	..
1967—68	IV	..	..	..	..
1968—69	V	17·40	236·500	166·00	..
1968—69	IV (arrear) ..	15·38	327·500	279·00	..
1969—70	VI	14·97	74·000	112·00	..
1970—71	VII	16·19	82·000	139·00	..
1971—72	VIII ..	21·50	168·350	81·00	..
Total yield realised for the entire series		170·00	1,593·850		
Average yield per hectare			9·3		

NOTE.—Major part of the felled areas in Govindapuram F F S have been proposed for raising Eucalyptus plantations

Year of felling.	*Chinnasamudram South F.F.S.*			
	Coupe No.	*Area in ha.*	*Yield in tonnes.*	*Revenue per ha*
(1)	(2)	(3)	(4)	(5)
1961—62	XXV	9·71	50·800	210·00
1962—63	XXVI	9·30	299·700	220·00
1963—64	XXVII	19·42	196·000	373·00
1964—65	I	17·40	50·000	403·00
1965—66	..	.	.	.
1966—67	II	15·38	301·700	195·00
1966—67	III	15·78	.	.
1967—68	IV	14·16	83·500	150·00
1968—69	V	13·35	87·000	157·00
1969—70	VI	12·95	57·000	116·00
1970—71	VII	15·38	89·000	146·00
1971—72	VIII	14·10	90·000	310·00
Totol yield realised for the entire series		159·93	1304·700	
Average yield per hectare			8·300	

ALANGAYAM RANGE

Year of felling	*Alangayam F.F.S.*			
	Coupe No.	*Area in ha.*	*Yield in tonnes.*	*Revenue per ha*
(1)	(2)	(3)	(4)	(5)
1961—62	XXV	29·14	667·052	383·00
1962—63	XXVI	27·92	220·472	235·00
1963—64	XXVII	38·04	366·776	91·00
1964—65	I	34·80	335·534	381·00
1965—66	II	30·35	377·444	225·00
1966—67	..	..	..	..
1967—68	..	..	..	..
1968—69	..	..	..	..
1969—70	V	32·80	506·984	441·00
1970—71	VI	32·80	430·784	451·00
1971—72	VII	33·60	371·602	225·00
1971—72	VIII	39·00	131·826	155·00
Total yield realised for the entire series		298·45	3,408·474	
Average yield for hectare			11·420	

year of felling	*Mandarakuttai F.F.S.* *Coupe No.*	*Area in ha.* (6)	*Yield in tonnes.* (7)	*Revenue per ha.* (8)	(9)
1961—62	XXV	25·90	608·584	524·00	
1962—63	XXVI	27·52	653·288	494·00	
1963—64	XXVII	22·25	755·90	383·00	
1964—65	I	31·60	1,162·000	840·00	
1965—66	II	39·60	1,353·074	556·00	
1966—67	III	36·40	1,551·940	840·00	
1967—68	IV	29·50	1,444·404	620·00	
1968—69	V	34·00	964.692	785·00	
1969—70	VI	35·20	978·974	861·00	
1970—71	VII	31·20	841·756	906·00	
1971—72	VIII	32·00	612·140	410·00	
1971—72	..	..	..	..	
Total yield realised for the entire series		345·17	10,926·756		
Average yield per hectare		31·647			

APPENDIX XXX.

THE FOLLOWING STATEMENT SHOWS THE ANNUAL YIELD OF DIFFERENT ITEMS OF MINOR FOREST PRODUCE FROM THE YEAR 1960–61—*con*..

Name of range and name of Produce. (1)	(2)	1960–61. (3)	1961–62. (4)	1962–63. (5)	1963–64. (6)	1964–65. (7)	1965–66. (8)	1966–67. (9)	1967–68. (10)	1968–69. (11)
I. Tiruvannamalai Range—										
1. **Tamarind**	Kgs.	..	475·00	746·00	630·00	328·00	284·00	375·00	565·00	297·00
II. Sathanur Range—										
1. Tamarind	Kgs.	276·00	..	..	..	..	..	..	180·00	120·00
2. Gall nut	Do.	13,575·00	17,375·00	1,210·00	3,975·00	..	..	..	..	100·00
3. Soap nut	Do.	226·80	4,672·08	7,675·00	10,150·00	250·00	2,450·00	..	1,485·00	..
4. Avaram and sural bark	Do.	..	..	2,250·00 Avaram.	2,555·00	..	..	..	..	..
5. Ettikottai (Nexovomica)	Do.	..	..	2,280·00	720·00	..	..	..	..	..
6. Kalakkai	Do.	362·88	..	3,800·00	13,520·00	..	4,500·00	..	..	..
7. Karuveppilai	Do.	..	..	2,050·00	..	190·00	2,875·00	105·00	..	..
8. Mavali Roots	Do.	..	..	2,940·00	4,080·00	325·00	..	110·00	..	..
9. Sundakkai	Do.	..	..	..	5,100·00	..	..	..	..	..
10. Elandai	Do.	..	..	..	..	..	..	..	..	..
11. Other items	Do.	..	..	..	..	..	..	..	..	..
III. Chengam Range—										
1. Tamarind	Kgs.	22,902·26	4,003·02	1,638·76	549·00	1,920·00	2,800·00	2,080·00	50,702·40	300·00
2. Gall nut	Do.	20,882·84	4,966·92	1,664·62	1,500·00	24,000·00	..	3,172·00	16,700·00	17,000·00
3. Soap nut	Do.	1,288·21	5,034·96	..	..	1,400·00	400·00	100·00	2,284·80	..
4. Avaram bark, Srul bark	Do.	..	..	..	..	..	..	..	..	..
5. Ettikottai (Nexovomica)	Do.	1,066·87	..	..	..	7,400·00	..	8,995·00	1,120·00	8,550·00
6. Kalakkai	Do.	..	..	13,760·00..	..	..	..	..	..	..
7. Pungam nuts	Do.	8,788·95	3,549·42	303·91	472·00	7,100·00	..	8,958·00	2,195·20	6,150·00
8. Mavali Roots	Do.	2,008·54	..	..	..	..	..	395·00	3,416·00	11,400·00

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
9. Nellikkai	Do.	6,045·59	..	20,000·00	..	..	500·00	14,300·00	15,795·00	28,710·00
10. Wood apple	Do.	5,040·00	2,268·00	4,122·72	523·00	..	500·00	24,185·00	4,928·00	69,740·00
11. Honey	Do.	38·56	..	55·79	33·00	27·00	..	..	..	..
12. Wild caster	Do.	1,930·52	..	..	..	..	..	17,550·00	1,204·00	800·00
13. Other items	Do.	152·41	..	..	870·00	..	..	..	..	..
		Kajjakai 152·41			Konnai bark					
		Sambur horn 952·560								
		Kattu seeragam 1,320·88								
		sekai								
III. Tirupathur Range—										
1. Tamarind	Kgs.	36,100·00	6,554·00	15,440·00	842·00	6,048·00	15,350·00	3,160·00	25,570·00	2,425·00
2. Gall nut	Do.	16,565·00	54,990·00	28,586·00	21,537·00	41,780·00	60,952·00	51,574·00	60,190·00	71,600·00
3. Soap nut Manipungam	Do.	2,890·00	..	1,601·00	670·00	1,860·00	41·00	1,125·00	2,075·00	1,550·00
4. Mavalli roots	Do.	..	..	..	..	..	315·00	..	175·00	..
5. Nellikkai	Do.	..	..	..	1,700·00	..	7,200·00	...	126·00	700·00
6. Wood Apple	Do.	2,192·00	6,075·00	16,450·00	8,680·00	7,000·00	21,175·00	19,325·00	6,000·00	20,550·00
7. Other items	Do.	..	1,320·00	..	110·00	..	..	..	50·00	..
			seekai		seekai				palmyarah	
			2,025·00		11·00					
			konnai bark		honey					
IV. Alangayam Range.—										
1. Tamarind	Kgs.	10,146·50	41,028·25	8,638·34	21,095·00	5,800·00	6,433·00	14,220·00	46,700·00	38,166·00
2. Gall nuts	Do.	32,592·00	12,756·00	95,166·00	8,288·00	4,010·00	14,450·00	8,900·00	13,200·00	11,914·00
3. Soap nut	Do.	923·75	..	..	80·00	80·00	..	250·00	..	92·00
4. Mavalli roots	Do.	1,841·00	653·06	6,192·00	250·00	..	..	..	..	..
5. Nellikkai	Do.	829·50	..	..	1,840·00	..	..	2,000·00	180·00	..
6. Wood apple	Do.	12,500·00	47,475·00	15,000·00	13,500·00	13,875·00	70,000·00	6,500·00	2,300·00	9,500·00
7. Pungam nuts	Do.	3,974·00	..	..	122·00	120·00	500·00	3,590·00	500·00	..
8. Seekai	Do.	..	816·30	..	..	..	300·00	900·00	..	..
9. Kalakkai	Do.	100·00	240·00	..	..	..	..	..	218·00	..
10. Other items	Do.	264·00	450·00	4,800·00		500·00	80·00		1,750·00	
		avaram	elendai	konnai		avaram	kattu seragam		muthukottai	
		10·50		817·00						
		elendai		**avaram**						

APPENDIX XXX—*cont.*

THE FOLOLWING STATEMENT SHOWS THE ANNUAL YIELD OF DIFFERENT ITEMS OF MINOR FOREST PRODUCE FROM THE YEAR 1960–61—*cont.*

Name of range and name of Produce. (1)		1969–70. (11)	1970–71. (12)	1971–72. (13)	1972–73. (14)	1973–74. (15)	1974–75. (16)	1975–76. (17)	Total (18)	Avarage (19)
I. Tiruvannamalai Range—										
1. Tamarind	Kgs. ..	361·00	700·00	910·00	505·00	998·00	3,060·00	371·00	10,605·00	707·00
II. Sathanur Range—										
1. Tamarind	Kgs. ..	..	4,800·00	..	7,250·00	40·00	..	..	12,666·60	2,111·00
2. Gall nut	Do. ..	..	6,300·00	5,775·00	..	..	15,475·00	8,250·00	72,035·00	8,004·00
3. Soap nut	Do. ..	..	7,400·00	..	1,140·00	28,259·00	5,375·00	7,500·00	76,582·88	6,382·00
4. Avaram and sural bark ..	Do. ..	..	1,850·00 (avaram)	..	800·00 (avaram)	..	..	..	7,455·00	1,864·00
5. Nuxovomica	Do. ..	..	..	..	..	..	..	..	3,000·00	1,500·00
6. Kalakkai	Do. ..	..	4,690·00	..	..	69·00	..	..	26,941·00	4,490·00
7. Karuveppilai	Do. ..	..	..	..	..	831·00	..	..	6,051·00	1,210·00
8. Mavali roots	Do. ..	..	6,975·00	1,000·00	..	700·00	3,575·00	4,050·00	23,755·00	2,639·00
9. Sundakkai	Do. ..	..	760·00	..	..	..	..	200·00	6,060·00	2,020·00
10. Elandai	Do. ..	..	..	..	..	1,040·00	450·00	..	1,490·00	745·00
11. Other items	Do. ..	..	..	..	2,400·00 Konnai bark	406·00 Neer pungam	1,000·00 Broom stick	2,600·00 Povangai	..	..
III. Chengam Range.—										
1. Tamarind	Kgs. ..	650·00	73,350·00	1,07·325·00	34,060·00	250·00	4,000·00	35,680·00	342,210·44	21,388·00
2. Gall nut	Do. ..	22,100·00	20,100·00	6,600·00	26,700·00	10,550·00	30,375·00	12,750·00	219,061·38	14,604·00
3. Soap nut	Do. ..	440·00	2,500·00	1,275·00	..	3,225·00	6,000·00	..	23,947·97	2,177·00
4. Avaram bark and surul bark	Do. ..	..	..	..	..	1,825·00	..	..	1,825·00	1,825·00
5. Nuxovomica	Do. ..	83·00	..	..	1,750·00	..	..	4,640·00	32,604·87	4,076·00
6, Kalakai	Do. ..	..	..	..	8,585·00	..	..	..	22,345·00	11,172·00
7. Pungam nuts	Do. ..	13,200·00	2,050·00	19,050·00	6,370·00	..	..	3,950·00	82,137·48	6,318·00
8. Mavali roots	Do. ..	2,930·00	500·00	3,450·00	9,950·00	..	..	4,700·00	38,749·54	4,306·00
9. Nellikkai	Do. ..	6,020·00	27,100·00	4,050·00	1,984·00	8,775·00	2,02,500·00	7,200·00	3,42,979·59	26,383·00
10. Wood apple	Do. ..	85,175·00	20,400·00	9,350·00	5,450·00	4,550·00	..	22,150·00	2,58,381·72	18,456·00

		(11)	(12)	(13)	(14)	(15)	(16)	(17)	Total (18)	Avarge (19)
11. Honey	Do. ..	..	..	..	..	..	..	..	154·35	38·57
12. Wild caster	Do. ..	970·00	1,950·00	1,650·00	1,250·00	..	..	..	27,304·52	3,413·00
13. Other items	Do. ..	300·00 sekai	..	1,200·00 broom stick	..	87,500·00 konnai bark	10,800·00 sundakai	2,100·00 sundakai 100·00 Neer pungam	..	..
III. Tirupathur Range—										
1. Tamarind	Do. ..	6,150.00	15,550·00	9,000·00	2,820·00	2,525·00	3,560·00	11,200·00	162,294·00	10,143·70
2. Gall nut	Do. ..	81,000·00	3,14,570·00	54,300·00	29,350·00	133,200·00	76,776·00	23,755·00	11,20,185·00	70,011·56
3. Soap nut manipungam ..	Do. ..	475·00	500·00	1,750·00	425·00	2,200·00	2,650·00	400·00	20,212·00	1,347·46
4. Mavalli roots	Do. ..	1,350·00	..	..	5,150·00	..	..	4,550·00	11,540·00	2,308·00
5. Nexovomica	Do. ..	3,600·00	11,000·00	2,200·00	28,100·00	11,800·00	1,000.00	300·00	67,726·00	6,157·00
6. Wood apple	Do. ..	9,375·00	18,950·00	2,800·00	..	39,500·00	6,675·00	12,540·00	1,97,287·00	13,152·46
7. Other items	Do. ..	..	10·00 Honey	..	..	..	..	52,025·00 Konnai bark 500·00 Elandai 800·00 Pungam	..	..
IV, Alangayam Range—										
1. Tamarind	Kgs. ..	11,815·00	11,430·00	20,873·00	57,920·00	20,800·00	32,850·00	17,000·00	3,64,915·09	22,807·19
2. Gall nuts	Do. ..	3,550·00	34,500·00	30,000·00	24,050·00	20,000·00	10,800·00	13,000·00	3,37,176·00	21,073·50
3. Soap nut	Do. ..	..	2,700·00	..	..	..	..	..	4,125·75	687·62
4. Mavalli roots	Do. ..	..	..	..	6·00	..	..	..	8,942·06	1,784·41
5. Nellikkai	Do. ..	..	..	..	..	..	..	..	4,849·50	1,212·37
6. Wood apple	Do. ..	3,100·00	2,775·00	6,600·00	11,500·00	30,000·00	7,500·00	33,000·00	285,125·00	1,782·31
7, Pungam nuts	Do. ..	**120·00**	198·00	500·00	..	..	..	..	9,624·00	1,069·33
8. Seekai	Do. ..	..	..	..	..	..	..		2,016·30	**672·10**
9. Kalakkai	Do. ..	..	220·00	..	..	..	..	..	778·00	**194·50**
10. Other items	**Do.** ..	..	..	4,500·00 **Kannai**	..	..	..	..	..	..

APPENDIX XXXI

MINOR FOREST PRODUCE.

The following statement showing the Revenue realised from different minor forest produce units, Range war from 1961–62.

Name of Range and name of M F P Farm	1961–62.		1962–63.		1963–64.		1964–65.		1965–66.		1966–67.		1967–68.		1968–69.	
(1)	(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)	
	RS.	P.	RS.	P	RS.	P.	RS.	P.	RS.	P.	RS.	P.	RS.	P.	RS.	P.
I. Tiruvannamalai Range.																
All M.F.P. in whole Tiruvannamalai M.F.P. Farm.	355	00	357	00	360	00	251	00	300	00	475	00	510	00	2,000	00
II. Sathanur Range.																
1. Gall nuts (whole Range)	675	00	1,500	00	1,225	00	....		....		....		....		49	00
2. Avaram bark and surul bark (whole Range).	....		520	00	450	00	330	00	....		....		....		....	
3. Konnai bark (whole Range). ..			....		....		....		....		....		....		....	
4. *All M.F.P. except three above.*																
(*a*) Pinjur Farm (21,76292 hectares) ..	2,900	00	2,895	00	2,900	00	....		1,950	00	....		885	00	....	
(*b*) Valasamalai Farm (7,652·34 hectares.)	....		1,155	00	1,570	00	1,605	00	1,500	00	1,605	00	....		....	
(*c*) Chinniyampettai Farm (5,457·05 hec.)	255	00	600	00	680	00	225	00	525	00	680	00	....		....	
III. *Chengam Range.*																
1. Gall nuts (whole Range)	1,655	00	2,655	00	2,000	00	3,510	00	3,250	00	3,310	00	4,225	00	4,959	00
2. Avaram bark and surul bark (whole range).	....		....		....		....		....		....		....		1,700	00
3. Konnai bark (whole range)	....		....		1,500	00	....		....		....		....		....	
4. *All M.F.P. excluding three above.*																
(*a*) Pelamarathur Farm (16,002·85 hectares)	850	00	3,410	00	2,200	00	2,310	00	4,140	00	4,140	00	3,625	00	4,000	00
(*b*) Mudanai Farm (6,420·58 hectares) ..	1,370	00	4,205	00	1,740	00	1,405	00	1,425	00	1,725	00	1,700	00	1,700	00
(*c*) Anandavadi Farm (8,269·90 hectares).	910	00	635	00	655	00	2,800	00	1,750	00	2,100	00	....		140	00
IV. *Tirupathur Range.*																
1. Gall nuts (whole Range)	2,600	00	2,600	00	2,650	00	2,700	00	2,675	00	2,700	00	2,700	00	2,805	00
2. Avaram bark and surul bark (whole range).	110	00	120	00	110	00	114	00	116	00	120	00	....		....	
3. Konnai bark	510	00	....		....		....		1,605	00	....		....		....	
4. *All M.F.P. excluding three above.*																
(*a*) Andiappanur Farm (only Andiappanur R.F.) (3,852·12 hectares).	1,005	00	1,759	00	3,500	00	3,549	00	5,601	00	4,505	00	7,799	00	4,630	00
(*b*) Excluding Andiappanur Farm in whole range (19,020·00) hectares.	800	00	850	00	860	00	850	00	900	00	900	00	1,100	00	1,050	00

(*c*) **Andiappanur** RH compound, **Singarapet RH compound, sandalwood depot,** D.F.O. office compound.	160 00	405 00	701 00	599 00	900 00	....	1,126 00	....
(*d*) Vasanthapuram Farm (26 Tamarind trees).	....	....	....	210 00	505 00	510 00	1,600 00	850 00
(*e*) Pungampet Farm (3,929·23 hectares)	....	....	....	880 00	1,395 00	1,410 00	1,400 00	1,620 00
(*f*) Pudur Farm (2,100·79) hectares. ..	....	....	....	440 00	460 00	460 00	600 00	810 00
(*g*) Nellivasal Farm (2,708·66 hectares) ..	....	....	....	440 00	1,500 00	1,005 00	1,105 00	1,215 00
V. *Alangayam Range.*								
1. Gall nuts (whole range)	2,000 00	2,755 00	2,610 00	4,000 00	6,005 00	2,767 00	4,405 00	4,400 00
2. Avaram bark surul bark and Konnai bark (whole range).	60 00	1,361 00	60 00	70 00	....	....	....	....
3. *All M.F.P. other than the above two items* —								
(*a*) Alangayam Farm (1,4159·94 hectares).	5,000 00	6 110 00	6,037 00	5,716 00	6,575 00	7,110 00	20,000 00	15,015 00
(*b*) Yelagiri Farm (6,682·56 hectares). ..	1,700 00	1,405 00	1,200 00	3,000 00	3,120 00	4,230 00	7,614 00	942 00
(*c*) Vellakuttai Farm (1,221·24 hectares)..	162 00	170 00	160 00	....	1 71 00	260 00	300 00	310 00

APPENDIX XXXI—*cont.*

MINOR FOREST PRODUCE—*cont.*

THE FOLLOWING STATEMENT SHOWING THE REVENUE REALISED FROM DIFFERENT MINOR FOREST PRODUCE UNITS RANGE WAR FROM 1961–62—*cont.*

Name of range and name of M.F.P. Farm.	1969–70 (10)		1970–71 (11)		1971–72 (12)		1972–73 (13)		1973–74 (14)		1974–75 (15)		1975–76 (16)		*Total.* (17)		*Average per Annum.* (18)	
	RS.	P.	RS.	P.	RS.	P.	RS.	P.	RS.	P.	RS.	P.	RS.	P.	RS.	P.	RS.	P.
I. *Tiruvannamalai Range.*																		
1. All M. F. P. in whole Tiruvannamalai M.F.P. Farm.	1,025	00	1,125	00	2,330	00	2,760	00	2,250	00	3,550	00	1,600	00	16,744	00	1,116	00
II *Sathanur Range.*																		
1. Gall nuts (whole range)	Sale dropped ordered by Conservator.		505	00	530	00	1,920	00	3,100	00	2,200	00	1,050	00	12,754	00	1,275	00
2. Avaram bark and surul bark (whole Range).	Do.		..		..		..		..		..		..		1,300	00	433	00
3. Konnai bark (whole Range)	Do.		..		..		325	00	..		..		..		325	00	325	00
4. *All M.F.P. except three above.*																		
(*a*) Pinjur Farm (21,762·92 hectares) ..	Do.		525	00	3,155	00	1,850	00	1,860	00	2,500	00	4,020	00	25,440	00	2,313	00
(*b*) Valasamalai Farm (7,652·34 hectares).	Do.		..		1,015	00	1,500	00	3,100	00	2,100	00	3,500	00	18,650	00	1,865	00
(*c*) Chinniyampettai Farm (5,457·05 hec.)	Do.		..		475	00	..		..		1,300	00	2,260	00	7,000	00	798	00
III. *Chengam Range.*																		
1. Gall nuts (whole Range)	6,350	00	3,360	00	3,400	00	3,400	00	3,800	00	7,750	00	8,100	00	61,724	00	4,115	00
2. Avaram bark and surul bark (whole Range).	..		..		..		..		2,650	00	..		..		4,350	00	2,175	00
3. Konnai bark (whole Range)	..		..		..		..		..		..		..		1,500	00	1,500	00
4. *All M.F.P. excluding three above.*																		
(*a*) Pelamarathur Farm (16,002·85 hectares).	4,100	00	4,100	00	4,175	00	4,150	00	4,525	00	8,900	00	9,200	00	63,825	00	4,255	00
(*b*) Mudanai Farm (6,420·58 hectares) ..	1,710	00	1,715	00	1,710	00	1,600	00	1,700	00	2,000	00	8,010	00	33,715	00	2,248	00
(*c*) Anandavadi Farm (8,269·90 hectares)	670	00	400	00	455	00	..		450	00	2,050	00	2,150	00	15,165	00	1,163	00
IV. *Tirupathur Range.*																		
1. Gall nuts (whole Range)	2,350	00	2,507	00	2,532	00	2,534	00	2,525	00	2,531	00	2,530	00	39,439	00	2,629	00
2. Avaram bark and surul bark (whole Range).	..		108	00	..		..		..		..		..		798	00	114	00
3. Konnai bark (whole Range)	..		..		..		..		..		..		2,505	00	4,620	00	1,540	00
4. *All M.F.P. excluding three above.*																		
(*a*) Andiappanur Farm (only Andiappanur R.F.) (3,852·12 hectares).	5,705	00	6,050	00	5,475	00	4,900	00	5,480	00	5,425	00	5,560	00	70,943	00	4,730	00
(*b*) Excluding Andiappanur Farm in whole Range (19,020·00 hactares).	1,260	00	..		1,285	00	3,500	00	2,600	00	2,610	00	3,210	00	21,775	00	1,555	00

(c) Andiappanur RH compound, Singarapet RH compound, sandalwood depot. D.F.O. office compound.	100 00	505 00	515 00	400 00	505 00	601 00	630 00	7,147 00	550 00
(d) Vasanthapuram Farm (26 Tamarind trees).	895 00	1,130 00	1,000 00	1,020 00	1,060 00	1,800 00	..	10,580 00	962 00
e) Pungampet Farm (3,929·23 hectares)	1,750 00	1,485 00	1,580 00	1,540 00	1,523 00	..	..	14,583 00	1,458 00
(f) Pudur Farm (2,100·79 hectares). ..	950 00	705 00	760 00	743 00	733 00	..	..	6,561 00	656 00
(g) Nellivasal Farm (2,708·66 hectares).	1,260 00	1,114 00	1,155 00	1,134 00	1,135 00	..	..	11,063 00	1,106 00
V. *Alangayam Range.*									
1. Gall nuts whole Range)	4,105 00	4,300 00	4,600 00	3,950 00	3,856 00	3,957 00	3,940 00	57,650 50	3,843 00
2. Avaram bark, Surul bark and Konnai bark (whole Range).	..	..	400 00	..	..	..	..	1,951 00	390 00
3. *All M.F.P. other than the above two items* —									
(a) Alangayam Farm (14,159·94 hectares).	15,550 00	17,000 00	16,505 00	16,700 00	17,100 00	20,000 00	21,200 00	1,95,618 00	13,041 00
(b) Yelagiri Farm (6,682·56 hectares) ..	3,000 00	4,880 00	4,277 00	3,795 00	4,012 00	3,873 00	3,981 00	50,529 00	3,369 00
(c) Vellakuttai Farm (1,221·24 hectares)	325 00	325 00	14 00	205 00	290 00	760 00	860 00	4,312 00	307 00
								6,60,061 50	

APPENDIX XXXII,

Statement showing the revenue realised from Tirupathur division during the past years from 1961–62 to 1975–76.

Serial number and source of revenue.	Years								
	1961–62	1962–63	1963–64	1964–65	1965–66	1966–67	1967–68	1968–69	1969–70
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	RS. P.	RS. P.	RS. P.	RS. P.	RS. P.	RS. P.	RS. P.	RS. P.	RS. P.
By Government Agency :									
1 Sandal wood	84,58,601·62	50,69,362·87	62,83,630·61	51,38,588·47	35,66,659·77	57,58,233·73	84,07,080·94	86,86,189·80	82,89,753·03
2 Timber	..	28·00	..	..	..	..	..	..	..
3 Fuel (Firewood and charcoal)	120·00	..	8·07	..	..	..	..	..	..
4 Bamboo	156·00	..	..	..	..	..	..	19,187·15	23,054·15
5 Other M. F. Produce	343·75	269·53	438·00	243·00	..	..	609·00	383·72	6,530·35
By Consumers or Purchasers :—									
6 Timber	60·12	205·80	18·00	51·48	216·28	45·55	11·89	732·42	84·23
7 Fuel (Firewood and Charcoal)	3,31,237·25	2,51096·62	2,50,744·25	2,91,149·12	2,73,102·75	3,76,576·00	2,29,178·50	2,72,828·05	1,77356·15
8 Bamboo	3,35,436·00	1,84,684·13	3,37,423·31	3,60,565·71	348,240·22	5,36,287·80	3,00,715·00	2,24,062·75	1,61967·40
9 Grazing and Fodder Grass	24,696·16	26 915·52	26,465·26	42,977·06	45,142·00	45,706·44	42,091·36	39,649·85	32,315·85
10 Other Minor Forest Produce	76,495·01	37,667·72	33,401·45	36,512·45	47,198·74	43,778·00	56,625·10	45,853·40	44,471·85
11 Driftwood and waifwood and confiscated Forest Produce.	2,009·33	1,193·21	1,357·58	1,048·07	797·46	499·12	465·56	448·75	380·20
12 Fines and perfecture	31,628·73	28,262·00	36,758·71	54,332·61	1,28,081·58	83,611·40	61,138·85	44,823·72	28,266·60
13 Rents on buildings and Rest houses ..	2,085·34	2,359·13	2,648·07	2023·11	2,998·07	3,869·87	4,634·55	4,751·65	4,304·98
14 Miscellaneous other sources ..	48,229·45	46,288·19	59,354·18	58,853·88	90,979·52	92,505·24	3,28,843·41	3,378·98	45,510·42
15 Receipt from Ex-Zamin Forest . .	531·51	279·18	436·00	380·36	1,004·00	1,389·20	619·45	96·00	745·75
16 Receipt from Development Schemes and other receipts Panchayats.	47,986·15	42,333·23	49,823·62	47,797·18	46,821·62	61,588·95	53,636·95	20,014·15	42,841·37
17 Receipts from Forest Plantations :— (i) Eucalyptus plantations . . .	..	.	.	.	.	.	.	.	.
(ii) Farm Forestry Plantations . .	.	.	.	.	.	..	..	..	..
18 Misc. Revenue realised in other divsion ..	..	..	..	..	..	..	..	..	..
Total	93,59,616·42	56,90,945·13	70,82,507·11	60,34,522·50	45,51,342·01	70,04,091·30	94,85,650·56	94,12,400·39	88,57,582·33
Deduct refunds by forest officers	5,477·97	2,960·47	873·21	1,245·48	2,963·19	2,386·33	2,686·05	2,067·29	3,391·85
Deduct revenue relating to other divisions, realised in this division		..	..	..	..	..	..	..	..
Grand Total	94,54,138·45	56,87,984·66	70,81,633·90	60,33,277·02	45,48,378·82	70,01,704·97	94,82,964·51	94,10,333·10	88,54,190·48

(1)	1970—71 (11)	1971—72 (12)	1972—73 (13)	1973—74 (14)	1974—75 (15)	1975—76 (16)	Total (17)	Average per Annum (18)
By Government Agency :—								
1 Sandalwood	53,92,190·75	56,39,219·80	56,97,836·89	1,14,27,151·50	1,44,31,158·35	1,03,01,581·00	11,29,47,239·13	75,29,815·94
2 Timber	3·00	400·00	..	309·00	..	..	740·00	49·33
3 Fuel (Firewood and Charcoal)	852·00	95,097·00	4,412·25	1,662·75	..	..	1,17,152·07	7,810·14
4 Bamboo	3,582·00	7,535·00	7,315·00	6,110·00	..	..	66,939·30	4,462·62
5 Other M. F. Produce	9,646·50	271·25	14·00	..	..	..	18,749·10	1,249·94
By Consumers OR Purchasers :—								
6 Timber	..	..	..	..	..	..	1,425·77	95·05
7 Fuel (Firewood and Charcoal)	1,71,892·13	1,44,011·35	1,90,200·53	2,40,737·78	1,01,937·77	1,37,184·50	34,39,232·75	2,29,282·19
8 Bamboo	2,15,733·55	2,29,211·00	1,96,958·00	1,94,520·45	2,46,734·55	4,077·70	38,76,717·57	2,58,447·84
9 Grazing and Fodder Grass	33,674·70	57,417·70	54,461·99	51,599·29	80,955·03	80,681·29	6,84,749·50	45,649·97
10 Other Minor Forest Produce	52,614·95	55,386·00	55,837·80	59,260·80	78,737·15	85,008·00	8,08,848·42	53,923·21
11 Driftwood and waifwood and confisicated forest produce	1,636·45	1,768·67	425·60	1,187·50	330·50	294·10	13,842·10	922·81
12 Fines and Perfecture	35,160·09	22,728·05	15,624·15	30,720·82	10,353·50	5,065·32	6,16,556·13	41,103·74
13 Rents on buildings and Rest Houses	5,879·34	6,621·41	9,088·75	11,877·33	11,465·00	10,884·77	85,491·37	5,699·42
14 Miscellaneous other sources	52,696·57	83,757·22	92,760·36	1,70,463·29	2,71,507·72	1,57,716·84	16,52,845·27	1,10,189·68
15 Receipt from Ex-Zamin Forests	387·30	609·50	295·50	16·50	..	..	6,790·25	452·68
16 Receipt from Development Schemes and other receipts Panchayats.	51,263·89	83,371·41	1,10,409·52	55,632·96	..	..	7,13,520·90	47,568·06
17 Receipts from Forest Plantations :—								
(i) Eucalyptus plantations	.	.	.	.	1,279·00	64,795·70	66,074·70	4,404·98
(ii) Farm Forestry Plantations	.	.	..	2,63275·05	90,773·00	2,34,827·00	5,88,875.05	39,258·34
18 Misc. Revenue realised in other division	32·80	..	..	..	..	..	32·80	..
Total	64,27,246·02	64,27,405·36	64,35,640·24	1,25,29,525·82	1,53,25,231·57	1,10,82,116·22	12,57,05,822·18	83,80,388·14
Deduct refunds by forest officers	875·05	3,369·70	1,025·15	699·37	5,513·83	9,293·72	44,828·66	2,988·58
Revenue relating to other divisions, realised in the division	1,629·66	811·55	..	..	..	..	2,441·21	162·75
Grand total	64,24,741·31	64,23,224·11	64,34,615·09	1,25,28,825·65	1,53,19,717·74	1,10,72,822·50	12,56,58,552·31	83,77,236·82

APPENDIX—XXXIII

STATEMENT SHOWING THE FINANCIAL POSITION OF TIRUPATHUR DIVISION, SINCE 1916—62.

Serial number.	*Year.*	*Revenue.*	*Expenditure.*	*Surplus*	*Remarks.*
(1)	(2)	(3)	(4)	(5)	(6)
		RS. P.	RS. P.	RS. P.	
1	1961–62	93,54,138·45	4,89,958·90	88,64,179·55	..
2	1962–63	56,87,984·66	6,08,111·34	50,79,873·32	..
3	1963–64	70,81,633·90	6,52,629·04	64,29,004·86	..
4	1964–65	60,33,277·02	7,79,971·16	52,53,305·86	..
5	1965–66	45,48,378·82	7,93,538·80	37,54,840·02	..
6	1966–67	70,01,704·97	7,81,588·07	62,20,116·90	..
7	1967–68	94,82,964·51	7,76,798·69	87,06,165·82	..
8	1968–69	94,10,333·10	8,41,359·37	85,68,973·73	..
9	1969–70	88,54,190·48	8,45,824·35	80,08,366·13	..
10	1970–71	64,24,741·31	10,83,885·50	53,40,855·81	..
11	1971–72	64,23,224·11	11,92,016·37	52,31,207·74	..
12	1972–73	64,34,615·09	11,16,124·73	53,18,490·36	..
13	1973–74	1,25,28,825·65	14,23,387·17	1,11,05,438·48	..
14	1974–75	1,53,19,717·74	17,34,826·36	1,35,84,891·38	..
15	1975–76	1,10,72,822·50	20,13,240·94	90,59,581·56	..
	Total ..	12,56,58,552·31	1,51,33,260·79	11,05,25,291·52	..

APPENDIX XXXIV

STATEMENT SHOWING THE DETAILS OF AREAS AVAILABLE FOR RAISING FARM FORESTRY PLANTATIONS IN TIRUPATHUR DIVISION.

Serial number and name of village. (1)	*Classification of land.* (2)	*Survey number* (3)	*Area in acres.* (4)	*Area in hectares.* (5)	*Remark.* (6)
	Tiruvannamalai Block.				
1 Chinnakallapadi	Lake	1	81·32		
	,,	11-B	0·10		
			81·42	32·94	
2 Aruthirapattu	,,	15-2	31·90	12·90	
3 Appupattu	I Periyeri	22-2-A	35·15	15·23	
	II Sitteri	40	19·40		
	Water spread area	42-2	2·92		
	Do.	51-2	7·70		
	Do.	52-1	0·89		
			30·91	12·50	
4 S. V. Andappattu	I Periyeri	1-1	69·35		
	,,	7-2	0·39		
			69·74	28·21	
	II Sitheri	34-2	27·80		
	,,	73-3	0·35		
	,,	36-14	0·11		
			28·26	11·45	
5 Athippadi	Lake	34	44·89		
	Water spread area	39-5	0·46		
	,,	39-6	0·16		
	,,	45-1 56-1	2·18		
			47·69	19·30	
6 Panaiyur	Vannanthangal Yeri	34-1	42·75	17·31	
	Lake	109	104·79		
		27-4	1·62		
		29-1	0·27		
		114-2	31·50		
		115-2	0·18		
		115-7	0·32		
		115-9	1·84		
		117-6	0·09		
		117-15	0·50		
		183-2	1·50		
			142·61	57·57	
7 Thachampattu	Pudu Yeri	70	61·72	24·96	
	Palaiya Yeri	26	26·90	10·88	
8 S. V. Nallur	Yeri	4-4	30·41	12·30	
9 Thiruvarangam Valavetti	Yeri	5	70·28		
	Water spread area	14-1	2·88		
			73·16	29·62	
10 Thiruvanaimugam	Yeri	13-1A	43·51	17·60	
11 Thandarai	Periyeri	84-2	25·78		
	Water spread area	68-12	0·03		
	,,	68-13	0·16		
	,,	83-11	0·17		
			26·14	10·57	

APPENDIX XXXIV—*cont.*

Statement showing the details of areas available for raising Farm Forestry Plantations in Tirupathur Division—cont.

Serial number and name of village	*Classification of land.*	*Survey number.*	*Area in acres.*	*Area in hectares.*	*Remarks*
(1)	(2)	(3)	(4)	(5)	(6)
	Tiruvannamalai Block—cont.				
12 Thalayampallam	Periyeri	26	73·16	29·62	
	Sitteri	39	34·50	13·95	
13 Varaiyur	Lake	17	230·00		
	Water spread area	15-10	0·02		
	,,	16-5	0·63		
			230·65	93·35	
14 Kambattu	Yeri	3	34·06	13·75	
15 Ponnaiyur	Periyeri	69	72·38		
	Water spread area	114-2	31·50		
		115-1	0·18		
		115-9	1·84		
		115-10	0·78		
		117-8	0·08		
		117-22	0·12		
		183-12	1·50		
	Edaivaliyeri	3	52·95		
	,,	4-3	10·34		
			171·67	69·72	
16 Poraikal	Lake	26	48·93	19·78	
17. Kadagaman	Yeri	92	51·50		
	Do.	72-1	0·69		
	Proaikkal Village limit.	18	8·94		
			61·13	24·72	
18. Aradapattu	Kumaraiyappattu Eri	70	27·64		
	Do.	71-10	0·04		
	Do.	71-12	0·02		
		57	2·22		
			29·97	12·13	
	Aradapattu Yeri	77-1	48·85		
		81-5	2·24		
		76-5	0·24		
			51·33	20·75	
19. Perumanam	Periyeri	36-2	0·85		
		76-1A	93·51		
		77-1	0·68		
			95·04	38·44	
	Sitteri	46-10	0·06		
		46-11	0·09		
		67-5	0·12		
		74	44·85		
		75-B	1·65		
			46·77	18·93	
20. Paraiyampattu	Yeri	21	42·88	17·35	

APPENDIX XXXIV—*cont.*

STATEMENT SHOWING THE DETAILS OF AREAS AVAILABLE FOR RAISING FARM FORESTRY PLANTATIONS IN TIRUPATHUR DIVISION—*cont.*

Serial number and name of village. (1)	*Classification of land.* (2)	*Survey number.* (3)	*Area in in acres.* (4)	*Area in hectares.* (5)	*Remarks.* (6)
21. Pavupattu	Yerikuthiyeri	9	33·28		
	Water spread area	5	6·34		
			39·62	16·02	
	Lake	67	56·15		
	Water spread area	66-4	4·20		
	Do.	30-8	3·14		
			63·49	25·69	
22. Pavithiram	Periyeri	146	162·70		
	Water spread area	147-8	0·48		
	Do.	236-2	5·31		
			168·49	68·18	
	Chitteri	53-1	25·37		
	Thangal	53-2	83·17		
	Water spread area	65-1B	4·67		
			113·21	45·80	
23. Alaganandal	Yeri	13-2	71·45		
	Do.	8-1	0·58		
	Do.	11-1	4·70		
			76·73	31·03	
24. Viruduvilanginam	Yeri	27	54·50		
	Water spread area	15-2	6·65		
			61·15	24·72	
25. Kattampoondi	Yeri	84	136·50		
	Water spread area	92-1B	2·30		
			138·60	60·12	
26. Kulakkodi	Yeri	6	117·95		
		3-1	3·68		
			121·63	49·20	
27. Kalleri	Yeri	63	67·49		
		33-7	0·09		
		33-8	0·44		
			68·02	27·51	
28. Kilkaripur	Yeri	65	52·00		
		76-12	2·32		
		81-8	0·36		
			54·68	22·41	
29. Maduramapattu	Periyeri	79	60·10		
	Water spread area	75-7	1·70		
	Do.	62-15	0·20		
			62·00	25·09	

APPENDIX XXXIV—*cont.*

STATEMENT SHOWING THE DETAILS OF AREAS AVAILABLE FOR RAISING FARM FORESTRY PLANTATIONS IN TIRUPATHUR DIVISION—*cont.*

Serial number and name of village. (1)	*Classification of land.* (2)	*Survey number.* (3)	*Area in acres.* (4)	*Area in hectares.* (5)	*Remarks.* (6)
30. Navambattu	Periyeri	45	44·30		
	Water spread area	44-3	0·77		
			45·07	18·21	
	Puthiyandal Yeri	93	46·50	18·61	
31. Nariyapattu	Yeri	28-1	57·62		
	Water spread area	30-11	0·35	23·60	
			57·97		
32. Palaiyanur	Lake	63	60·35	..	..
	Water spread area	39	10·46		
	Do.	36/7	0·60		
			71·41	28·89	
	Manjurampatti Yeri	82	33·76		
	Water spread area	81/7	0·66		
	Do.	81-10	0·32		
			34·74	14·03	
33. Periyakalappadi	Yeri	54-1	108·71		
		39-3-B	0·63		
		101-1	2·30		
			111·64	45·16	
34. Devanur	Periyeri	17-1	79·52		
		42-1	0·32		
			79·84	33·29	
	Sitteri	103	25·00		
		104-1	2·47		
			27·47	11·08	
35. Issikali Katteri	Periyeri	35	56·56		
	Water spread area	25-9	1·20		
			57·76	23·38	
	Sitteri	111-11	41·85	16·95	
36. Kandiyankuppam	Yeri	66	29·51		
	Water spread area	29-14	3·38		
			32·89	13·30	
37. Nadupattu	Periyeri	45-5	16·12		
	Inkulakkudi village limit.	34	35·20		
	Do.	46-1	0·13		
			51·45	20·83	
38. Ayyampalayam	Lake	18	73·37	29·70	
	Do.	102	108·31	43·91	

APPENDIX XXXIV—*cont.*

STATEMENT SHOWING THE DETAILS OF AREAS AVAILABLE FOR RAISING FARM FORESTRY PLANTATIONS IN TIRUPATHUR DIVISION—*cont.*

Serial number and name of village. (1)	*Classification of land.* (2)	*Survey number.* (3)	*Area in in acres.* (4)	*Area in hectares.* (5)	*Remarks.* (6)
39. Pandithapattu	Lake	31	52·60	21·28	
40 Viswanthangal	Do.	39	137·80	55·76	
41. Kilchettipattu	Do.	15	33·85	13·71	
42. Meiyur	Do.	65	77·07	31·16	
43. Arasan 'im	Do.	27	55·10	22·65	
44. Saralpoondi	Do.	17	51·93	20·99	
45. Nichanandal	Do.	46	78·00	31·56	
46. Kilnakkarai	Do.	45	32·40	13·10	
47. Palliyampattu	Do.	160	39·57	16·02	
48. Malappambadi	Do.	54	70·64	29·56	
49. Melsikan	Big Lake	52	84·56	34·23	
50. Tenmarathur	Do.	64-1	150·00	60·70	
51. Chellankuppam	Lake	93	40·89	16·53	
52. Udayanandal	Do.	15	49·57	20·06	
53. Valavetti	Do.	81	67·50	27·31	
	Kilpennathur Block.				
54. Naraiyur	Periyeri	42	124·73	50·46	
55. Vaipoor	Do.	3-2	97·93	39·61	
	Sitheri	86-1A	24·31	9·83	
56. Venniyandal	Periyeri	25-B	25·95		
	Do.	26-7	1·84		
			27·79	11·33	
57. Velaiyampakkam	Vanakambadi yeri	65	92·52		
	Water spread area	77-2	2·53		
	Do.	85-1	4·14		
			99·19	40·42	
58. Vettavalam	Periyeri	1184	198·00	80·11	
59. (J) Kaniampondi	Lake	14	52·38	21·36	
60. Gudalur	Periyeri	429	123·87		
	Do.	5	2·33		
			126·20	51·78	
	Pudu Yeri	501	39·31		
		202	47·21		
			86·52	35·00	
61 (J) Agaram	Yeri	821	13·00		
	Periyeri	822	30·40		
			43·40	17·56	
62 Ponnamedu	Yeri	14	35·60	14·40	
63(J) Anukkamalai	Yeri	926	45·00	18·21	
	Valavetti Yeri	10-6	111·10	44·92	

APPENDIX XXXIV—*cont*.

STATEMENT SHOWING THE DETAILS OF AREAS AVAILABLE FOR RAISING FARM FORESTRY PLANTATIONS IN TIRUPATHUR DIVISION—*cont*.

Serial number and name of village. (1)	*Classification of land.* (2)	*Survey number.* (3)	*Area in in acres.* (4)	*Area in hectares.* (5)	*Remarks.* (6)
64. Sorathur	Yeri	41-1	24·70	9·99	
65. Kallanai	Yeri	58	70·67	31·27	
66. Angunam	Ariyamapallam Yeri	8-2	45·15		
		31-1A	0·58		
			45·73	18·49	
	Yeri	74	16·40		
	Do.	75-2	61·60		
			78·00	31·86	
67. Odaipadi	Periyeri	142	115·54		
	Water spread area	101-10	0·74		
		102-6	0·38		
		103-2	0·31		
		104-6	0·94		
		104-5	0·94		
			118·85	44·02	
	Sitheri	17-1	31·85	12·86	
68. Sevarapundi	Yeri	73	38·60	15·61	
69. Keekalur	Periyeri	205	144·50	58·47	
	Sitteri	181	40·60	16·42	
70. Nariyamangalam	Yeri	65	49·90	20·18	
71. Vadapundi	Lake	9	43·00	17·40	
72. Vattraputhur	Big Lake	8	35·80	14·48	
	Sitteri	55	20·30	8·21	
73. Sammandapuram	Lake	97	56·68	22·90	
74. Kumarakudi	Yeri	9	54·65	22·09	
75. Arinji	Yeri	29	96·05	38·84	
76. Andalur	Yeri	3	51·25	20·71	
77. Manavaram	Lake	47	31·45	12·70	
78. Vedanatham	Yeri	51	125·85	50·90	
79. Naivanatham	Big lake	10	45·75	18·41	
80. Gengamapattu	Lake	10	36·00	14·56	
	Thurinjapuram Block.				
81. Kilathur	Lake	20	39·77	16·06	
82. Meppathurai	Lake	93	152·98	61·87	
83. Chirukilambadi	Yeri	10	53·65	21·68	
84. Muthirsampondi	Lake	1	104·40	42·24	
85. Nellimedu	Lake	20	58·86	23·79	
86. Andapattu	Lake	1	138·15	55·88	
87. Devanampattu	Yeri	38	71·20	28·77	
88 Maruthuvambadi	Big lake	67	84·50	34·19	
	Small lake	31	52·60	21·28	

APPENDIX XXXIV—*cont*.

STATEMENT SHOWING THE DETAILS OF AREAS AVAILABLE FOR RAISING FARM FORESTRY PLANTATIONS IN TIRUPATHUR DIVISION—*cont*.

Serial number and name of village. (1)	*Classification of land.* (2)	*Survey number.* (3)	*Area in in acres.* (4)	*Area in hectares.* (5)	*Remarks.* (6)
			AC.HA.	RS. P.	
89. Kolakaravadi	Lake	1	90·75	36·70	
90. Silappanandal	Lake	7	52·58	21·04	
91. Osambadi	Yeri	55	34·64	13·99	
92. Thurinjapuram	Lake	51	65·51	26·50	
93. Muniyandal	Yeri	9	72·65	29·37	
94. Vengayavellur	Yeri	52	27·44	11·08	
95. Kannumaranji	Yeri	70	31·61	12·78	
96. Kalasthambadi	Yeri	13	161·32	65·27	
97. Vadakarimbalur	Lake	65	21·45	8·85	
98. Nallappanaickanpalayam	Lake	93	181·60	73·48	
99. Velunganandal	Do.	68	76·27	31·11	
100. Kamalaputhur	Periyeri	88	152·25	61·59	
	Sitteri	97	27·45	11·08	
101. Karkonam	Yeri	90	149·80	60·61	
102. Kovur	Yeri	85	79·00	31·97	
103. Budamangalam	Yeri	260	100·00	40·46	
104. Erampondi	Lake	1	128·31	51·92	
105. Mangalam	Do.	100	50·00	20·23	
106. Madalambadi	Do.	135-1	60·00	24·28	
107. Vellivagai	Yeri	65-3	50·00	20·23	
108. Kunnandal	Yeri	38	25·42	10·28	
	Chengam Block.				
109. Quilam	Thangal	113	27·12		
	Water spread area	112-2	2·93		
			30·05	12·14	
110. Alaputhur	Lake	40	40·02	16·19	
111. Chengam	Lake	141	160·50		
	Do.	143-3	0·67		
	In kayambattu village limit.	42	13·97		
			175·14	70·82	
112. Theethandapattu	Lake	28	40·70	16·19	
113. Chinnasamudram	Meleri	98	34·42		
	Kileri	111	25·94		
			60·36	24·44	
114. Pakkiripalayam	Periyeri	267-1	63·55	25·74	
	Pudur Yeri	93	66·50	26·91	
	Panicharam Thangal	178	16·65		
		198-1	3·38		
		198-2a	1·93		
			21·96	8·[illegible]	

APPENDIX XXXIV—*cont.*

STATEMENT SHOWING THE DETAILS OF AREAS AVAILABLE FOR RAISING FARM FORESTRY PLANTATIONS IN TIRUPATHUR DIVISION—*cont.*

Serial number and name of village. (1)	*Classification of land.* (2)	*Survey number.* (3)	*Area in in acres.* (4)	*Area in hectares.* (5)	*Remarks.* (6)
115 Melchengam	Lake	30	39·95	16·18	
116 Melvanakkambadi	Periyeri and Chitteri	89	125·00	50·59	
117 Vadankuppam	Eri	30	31·90		
	In Melvanakkambadi limit	108	3·38		
		110	14·04		
		113/1	0·47		
			49·79	20·20	
118 Narthapattu	Eri	52	47·05	19·02	
119 Melravandavady	Periyeri	23-1	42·72		
	Lake	104-2	3·01		
	Lake	114-4	3·21		
			48·94	19·82	
120 Neppathurai	Eri	19	36·75	14·89	
121 Elankunni	Thottiyeri	47	37·07	14·97	
122 Porasappattu	Periyeri	55	33·00		
	Lake Bed	19-2	4·67		
			37·67	15·26	
123 Kariyamangalam	Jamberi	246	40·42		
	Eri	267-2	0·21		
	Eri	244-1A	0·06		
			40·69	16·47	
124 Pinjur	Thulukkanthangal	95	33·65	13·64	
	Kesavanthangal	49-2	25·10	10·13	
125 Thukkapettai	Pappambadi yeri	49	80·70	32·66	
	Ramanthangal yeri	90	61·25		
	Do.	94-5	2·10		
	Sinnalappanthal	95	14·73		
			78·08	31·57	
	Thenvilamarathur yeri	133	57·80	23·06	
126 Melpennathur	Puthueri	112	45·00	18·45	
	Sangilipurvadi	32	41·95	16·99	
	Thandrampattu Block.				
127 Perungalathur	Annukullu eri	157	26·68		
	Water spread area	156-5	0·23		
	Do.	131-2	2·70		
	Do.	132-5	1·38		
			32·79	13·27	
	Periyeri	498	216·99	87·41	
128 Rayandapuram	Periyeri	115	121·85	49·96	
	Vijayapannur eri	208	97·10		
		207-2	2·05		
			99·15	40·14	
129 Tiruvadathanur	Kondatheri Lake	48	42·45		
	Do.	45-1	3·64		
	Do.	45-7	2·07	..	
			48·16	19·50	
130 Malamanjanur	Yeri	146	43·85	17·80	

APPENDIX XXXIV—*cont.*

STATEMENT SHOWING THE DETAILS OF AREAS AVAILABLE FOR RAISING FARM FORESTRY PLANTATIONS IN TIRUPATHUR DIVISION—*cont.*

Serial number and name of village.	*Classification of land.*	*Survey number.*	*Area in in acres.*	*Area in hectares.*	*Remarks.*
(1)	(2)	(3)	(4)	(5)	(6)
131 **Veppur** chekkadi	Yeri	84	28·60	11·57	
132 Melkaripur	Maruderi	87-1	42·77	17·32	
133 Viranam	Kurutham yeri	49	35·68	14·45	
134 Kilvanakkambadi	Veerappanthangal	112	33.26	13·47	
135 Edaithanur	(Edaithanur) Lake	32-1	37·76		
	Inenmudiyanur village limit	173-2	2·01		
	Do.	175	6·65		
	Do.	176-2	1·57		
			47·99	20·20	
136 Alappanur	Lake	9-1	35·10		
	In Tenmudiyanur village limit.	300	7·91		
			43·01	17·40	
137 Agram pallipattu	Periyeri	18	31·00		
	Do.	21-2	5·13		
			36·13	14·31	
138 Kottaiyur	Yeri	29-1	125·09	50·58	
139 Kungiliyanatham	Lake	23-1	54·74	22·14	
140 Tenkarimbalur	Periyeri	155	107·77		
		108-4	1·29		
		154-3	1·94		
		138-2	0·37		
		150-2	0·31		
		129-4 & 5	3·41		
		137-19	0·67		
			115·76	46·84	
	Ammattan yeri	22	26·13		
	Ammattan yeri	14-3	3·58		
		14-5B	8·63		
		20	2·56		
		23-3	6·01		
		24-4	0·12		
			47·03	19·02	
141 Vanapuram	Lake	93	79·18		
		34-2	0·97		
			80·15	33·10	
142 Serpapattu	Lake	4-1	68·26	27·64	
143 Kambattu	Lake	27-1	29·03		
		30-1B	0·97		
			31·00	12·55	
144 Varagur	Lake	35	40·40		
	Lake	37-5	0·13		
			40·53	16·38	
145 Koodalur	Lake	37	108·50	43·73	
146 Tenmudiyanur	Periyeri	100	96·69	39·13	

APPENDIX XXXIV—*cont.*

STATEMENT SHOWING THE DETAILS OF AREAS AVAILABLE FOR RAISING FARM FORESTRY PLANTATIONS IN TIRUPATHUR DIVISION—*cont.*

Serial number and name of village. (1)	*Classification of land.* (2)	*Survey number.* (3)	*Area in in acres.* (4)	*Area in hectares.* (5)	*Remarks.* (6)
147 Kanakkandal	Sitteri	22	40·00		
	Do.	17-1	0·99		
			40·99	16·59	
148 Agaram (S.E.)	Lake	72-1	54·53		
	In Perumbakkam village limit.	13-7	1·07		
	Do.	17-4	0·47		
	Do.	18-1	3·01		
	Do.	18-4	1·74		
			60·87	24·65	
	Pudupalayam Block.				
149 Munnur mangalam	Pettalai yeri	226	25·61		
	Do.	211	3·37		
	Do.	212	2·38		
			31·36	12·67	
	Odanjamadai yeri	160	**29.28**	**11.86**	
150 Pudurchengam	Lake	36	83·48	33·76	
151 Veeranandal	Kuppanyeri	506-1	107·49	43·50	
	Kalavai Puduthangal yeri	68	30·20	12·23	
	Sitteri	490-1	91·30	36·95	
152 Karappattu	Nagappadi yeri	900	75·92		
	Thangal	996	5·60		
	Do.	1,004	2·88		
			84·40	34·15	
	Nellikuppam yeri	745-2	72·74		
		1,002	1·04		
			73·78	29·87	
153 Puduppattu	Lake	100	69·16		
	Do.	99	0·55		
			69·71	28·20	
154 Puduppalayam	Nariyandal yeri	37-1	42·52	17·20	
155 Nandimangalam	Sikkalandal yeri	224	35·41		
	Water spread area	226	9·33		
	Do.	234	3·79		
	Do.	235	4·03		
	Do.	238	1·73		
	Do.	239	1·15		
			55·44	22·46	
156 Panaolaipadi	Melotteri	477	52·21		
	Anadinam	560-1	9·75		
	Do.	561- 1	1·17		
	Do.	561-2	1·15		
	Do.	561-3	3·51		
	Do.	562-1	2·39		
	Do.	562-3	3·24		
	Do.	563	8·44		
	Do.	564	11·82		
	Do.	565	13·42		
	Do.	566	11·13		
	Do.	567	10·91		
	Do.	568	13·13		
			144·58	[illegible]·52	
	Kilotteri	390	31·21	12·67	

APPENDIX XXXIV—*cont.*

STATEMENT SHOWING THE DETAILS OF AREAS AVAILABLE FOR RAISING FARM FORESTRY PLANTATIONS IN TIRUPATHUR DIVISION—*Cont.*

Serial number and name of village. (1)	*Classification of land.* (2)	*Survey number.* (3)	*Area in in acres.* (4)	*Area in hectares.* (5)	*Remarks.* (6)
157 Unnamalappalayam	Lake	49	67·23		
	Water spread area ..	52-3	1·86		
	In Pudurchengam village limit.	43	8·80		
			77·89	31·70	
158 Periyeri	Velankuttai yeri	54	111·39	45.09	
	Periyeri	91	58·34	23·64	
	Sarampattu Eri	24	30·70	12·43	
159 Muttanur	Lake	21	159·17	64·43	
160 Padiagraharam	Sitteri	3	165·96	67·18	
161 Vasudevampattu	Periyeri	54	65·60		
	Kulam	55-1	6·36		
	Water spread area ..	75-1	2·08		
	Odai	69-1	2·34		
	Do.	12	6·13		
			82·51	33·42	
162 Eraiyur	Sitteri	98	26·47	10·73	
163 Melpunjai	Periyeri	79	225·40		
	Do.	66-2	4·53		
			229·93	93·08	
	Seranthangal	54	35·15		
	In vasudevampattu village limit.	68	8·42		
			43·57	17·65	
164 Annandal	Yeri	37	143·70		
	Do. . ..	147-1	0·54		
	Do. . ..	147-2	0·58		
	In vasudevampattu village limit.	8-4	5·40		
		9-1	1·88		
			152·10	61·55	
165 Oravandavady	Lake	187	93·65	37·92	
166 Aridarimangalam	Kalapaiyeri	77	139·20		
	Do.	61-3	2·00		
	Water spread area ..	112–4	0·94		
		113	1·11		
		123-1	2.38		
		123-2	7·78		
			153·41	62·12	
	Periyeri	46	119·88	48·16	
167 Thamaraipakkam	Lake	129	190·06		
	Do.	180	6·13		
	Assessed waste	130-2	7·01		
			203·20	82·23	
	Thandukkarai yeri .	80	11·72		
	Assessed waste . .	73	9·37		
	Do.	74	12·00		
	Do.	75-1	7·92		
	Do.	77	11·47		
	Do.	78	7·98		
	Do.	79	8·69		
	Do.	82	11.96		
	Do.	83	7·48		
			88·59	35·85	

APPENDIX XXXIV—*cont.*

STATEMENT SHOWING THE DETAILS OF AREAS AVAILABLE FOR RAISING FARM FORESTRY PLANTATIONS IN TIRUPATHUR DIVISION—*cont.*

Serial number and name of village. (1)	*Classification of land.* (2)	*Survey number.* (3)	*Area in in acres.* (4)	*Area in hectares.* (5)	*Remarks.* (6)
168 Kariyandal (J)	Lake	70	96·90	39·22	..
169 Nattavady	Andithangal	11	42·88		..
		20-1	0·06		..
			42·94	17·40	..
170 Gangampattu	Andithangal	148	30·75		..
	Do.	124	9·13		..
	Do.	140-2	3·80		..
			43·68	17·69	..
171 Kilpadur	Jamberi	9-2	50·78		..
		22-9A	0·72		..
		28-2	9·31		..
		31-1	2·91		..
	In Melapadur village limit	1-1	5·20		..
			68·92	27·88	..
172 Voividanthangal	Melthangal	23-2	35·86		..
	In Melapadur village limit	75	4·65		..
		76	3 40		..
		77	2·35		..
		78-4	1·09		..
			47·35	19·19	..
173 Narasinganallur	Lake	7	63·76	25·82	..
174 Alliyandal	Do.	46	27·90	11·30	..
	TIRUPATHUR BLOCK				
175 Chandrapuram	Periya yeri	2	50·83	20·56	..
	Barandapalli yeri	615	53·60	21·77	..
176 Mallapalli	Reed sahib yeri	588	52·44	21·20	..
177 Ammankoil	Ammaniamman yeri	25	31·18	12·54	..
	Nayanthiyur yeri	440	33·85	13·75	..
178 Agraharam	Pudu yeri	371	27·73	11·33	..
179 Puthagaram	Ammankuttai yeri	109	24·80	10·11	..
	Puthagaram yeri	364	66·78	27·11	..
180 Katteri	Peria yeri	30	66·03	26·70	..
181 Yelegiri	Yelagiri yeri	94	104·52	42·48	..
182 Palnankuppam	Peria yeri	2	29·35	12·14	..
	Pappan yeri	101	23·60	9·71	..
	Kammalan yeri	146	34·40	13·75	..
183 Ponneri	Chinnakammianpattu yeri.	75	50·92	20·63	..
	Vanian yeri	214	25·33	10·71	..
	Peria yeri	250	39·70	16·18	..
184 Sakkaraikuppam	Pudu yeri	36	23·35	9·30	..
	Putheri	91	35·70	14·56	..
185 Vettapattu	Ellappalli yeri	159	32·00	12·94	..
	Chokkalampatty yeri	268	27·95	11·33	..
186 Thiryalam	Pudu yeri	98	22·62	9·30	..
	Pallaneri	155	32·42	13·10	..
	Thummaneri	225	34·62	14·16	..
187 Thamalerimuthoor	Thasabandam yeri	223	70·88	28·73	..

APPENDIX XXXIV—*cont.*

STATEMENT SHOWING THE DETAILS OF AREAS AVAILABLE FOR RAISING FARM FORESTRY PLANTATIONS IN TIRUPATHUR DIVISION—*cont.*

Serial number and name of village.	*Classification of land.*	*Survey number.*	*Area in in acres.*	*Area in hectares.*	*Remarks.*
(1)	(2)	(3)	(4)	(5)	(6)
188 Kudiyanakuppam	Peri yeri	101	35·60	14·56	..
	Betrayan yeri	150	29·01	11·73	..
189 Pachal	Puliankuttai yeri	139	26·80	10·92	..
	Puthaneri	187	30·78	12·54	..
	Vedicheri yeri	319	31·87	12·94	..
190 Achamangalam	Reed sahib yeri	177	70·55	28·73	..
191 Kadirimangalam	Elavath yeri	21	31·19	12·54	..
	Kadirimangalam Yeri	103	33·96	13·75	..
192 Rachamangalam	Rachamangalam yeri	216	98·52	39·85	..
	Pasalikuttai—Thasabandam yeri.	271	28·42	11·49	..
	Bombakuttai thasabandam yeri.	389	23·55	9·50	..
193 Konerikuppam	Konerikuppam yeri	104	50·56	20·43	..
194 Kadirampattu	Sevandampalli yeri	34	24·10	9·71	..
195 Bommikuppam	Pudu yeri	368	44·50	18·00	..
	Panankuttai yeri	284	28·69	11·97	..
196 Koodapattu	Pudur yeri	233	38·92	15·78	..
197 Thathavelli	Kondayan yeri	275	49·68	20·23	..
198 Madapalli	Thiruputher yeri	779	34·34	13·87	..
199 Tirupathur	Malakasi yeri	91	30·76	12·42	..
	Anandaneri	185	24·73	10·11	..
200 Mottur	Peria yeri	346	45·80	18·59	..
	KANDILI BLOCK.				
201 Udayamuthoor	Udayamuthoor yeri	156	64·52	26·09	..
	Kelkuppam yeri	524	23·94	9·71	..
202 Vishamangalam	Kamakeri	483	41·76	16·99	..
203 Sevvathoor	Vellakuttai yeri	50	25·10	10·11	..
	Sevvathoor yeri	494	59·45	24·03	..
204 Kunichi	Chinnakunichi yeri	214	39·20	15·78	..
205 Elavampattu	Peria yeri	417	30·40	12·30	..
	Soora yeri	13	183·81	74·44	..
206 Koratti	Peria yeri	280	29·95	12·14	..
207 Kakangarai	Pudu peria yeri	11	44·26	18·04	..
208 Naravindampatty	Gengamman yeri	10	30·25	12·14	..
209 Sundarampalli	Sundarampalli yeri	28	35·07	14·16	..
210 Natham	Sembakuttai yeri	6	30·91	12·54	..
	Peria yeri	36	31·79	12·94	..
211 Narianeri	Narianeri yeri	103	26·28	10·52	..
	Manavalli yeri	130	50·00	20·23	..
212 Periyagram	Peria yeri	106	50·00	20·23	..
213 Lakkinaickanpatty	Pallapally yeri	74	58·32	23·47	..
	Lakkinaickanpatty yeri	185	116·95	47·34	..
	Do.	194	48·31	19·42	..
	Kunchi yeri	220	112·63	45·55	..
214 Kasinaickanpatty	Velari yeri	201	55·70	22·53	..
215 Athiyur	Sellaiyan yeri	54	74·35	29·94	..
	Magbulkhan yeri	741	28·35	11·33	..
216 Vengalapuram	Venkatramaiyan yeri	187	53·33	21·44	..
217 Matrapalli	Beyankuttai yeri	68	44.00	17·80	..
	Beemaran yeri	262	44.00	17·80	..
	Do.	263	44.00	17·80	..

APPENDIX XXXIV—*cont.*

STATEMENT SHOWING THE DETAILS OF AREAS AVAILABLE FOR RAISING FARM FORESTRY PLANTATIONS IN TIRUPATHUR DIVISION—*cont.*

Serial number and name of village. (1)	*Classification of land.* (2)	*Survey number.* (3)	*Area in in acres.* (4)	*Area in hectares.* (5)	*Remarks.* (6)
218 Kurumberi	Periyeri	67	82·60	33·42	..
	Odderi	194	32·62	13·18	..
219 Simmanapudur	Kallaneri	159	23·76	9·71	..
	Odderi	372	69·72	28·20	..
	NATRAMPALLI BLOCK.				
220 Natrampalli	Vadikkoundan yeri	199	27·70	10·93	..
221 Bandarapalli	Kallukuttai yeri	216	28·30	11·45	..
222 Madanancheri	Pallipattu yeri	227	49·79	20·11	..
223 Pulluru	Poolakuttai yeri	1222	32·54	13·15	..
224 Ambalur	Kodayanji Big lake	566	44·10	17·65	..
225 Vadakuppathur	Pudu yeri	86	23·25	9·38	..
226 Mallagunta	Grazing ground	323	22·62	9·15	..
	Do.	341	31·98	12·90	
227 Vaniyambadi	Nagal yeri	341	67·40	27·27	..
	ALANGAYAM BLOCK.				
228 Perumapattu	Sandappan Tank	36	48·32	19·56	..
	Jadayanur yeri	347	26·70	10·70	..
229 Irunapattu	Ekkileri	176	85·68	34·65	..
230 Mariyammankuppam	Dasireddi Meleri	49	26·35	10·64	..
	Dasireddi Keleri	79	28·35	11·57	..
231 Alangayam	Dasabandam Jambueri	150	28·45	11·49	..
232 Peddur	Vannan yeri Tank	182	45·16	18·25	..
233 Bimakulam	Ayyan yeri	13	26·50	10·72	..
234 Kothakuttai	Errakuttai yeri	226	54·80	22·17	..
235 Govindapuram	Tirumanjolai	57	100·00	40·46	..
236 Kalendra	Palayayeri	24, 26, 27	24·78	9·99	..
237 Chinnaveppampattu	Chinnaveppampattu yeri.	76	..	11·30	..

APENDIX XXXV.

STATEMENT SHOWING THE RESERVE BOUNDARY TO BE CLEARED AND MAINTAINED I N TIRUPATHUR DIVISION.

Name of the Reserve Boundary. (1)	*Approximate length in km.* (2)
Tirupathur Range.	
Singarapet Reserved Forest	11
Govindapuram Reserved Forest	11
Mambakkam Reserved Forest	26
Andiyappanur Reserved Forest outer Boundary	15
Andiappanur Reserved Forest inner Boundary	13
Singarapet Extension Reserved Forest	16
Chinnasamudram Reserved Forest	13
Inner Javadis Reserved Forest (Nadukuppam Beat)	7
Inner Javadis Reserved Forest (Thagarakuppam Beat)	11
Inner Javadis Reserved Forest (Kuppanathan and Chinnasamudram beat)	16
II. Alangayam Range.	
Vellakuttai Reserved Forest and its Extension Reserved Forest	6
Alangayam Reserved Forest	16
Kalrapatti Reserved Forest	11
Pungulam Reserved Forest	18
Mangalam Reserved Forest	19
Jolarpet Reserved Forest	13
Nagaluthu Reserved Forest and its Extension Reserved Forest	16
Mangalam Extension Reserved Forest	23
Narasingapuram Reserved Forest	13
Inner Javadis Reserved Forest	15
Madakadappa Reserved Forest	15
III. Chengam Range.	
Melchengam Reserved Forest	11
Anandavadi Reserved Forest (Eastern and Southern)	13
Anandavadi Reserved Forest (Western and Northern)	10
Tenmalai Reserved Forest up to Kelaiyur	19
Palamarathur Reserved Forest	27
Nallappattu Reserved Forest	25
Tenmalai Reserved Forest (south of Kelaiyur)	10
Paramanandal Reserved Forest	12
Mudanai Reserved Forest	24
Damaraikadu Reserved Forest	25
Munnur Mangalam A Block Wester half	10
Munnur Mangalam A Block Easter half	8
Munnur Mangalam A Block	6
IV. Sathanur Range.	
Pinjur A Block Reserved Forest	15
Pinjur B Block Reserved Forest	16
Pinjur C Block Reserved Forest	9
Ponniar Reserved Forests starting from Ponniyar River in the west	30
P. Swamimalai Reserved Forest (Inter Reserve boundary of Nathampalli and Royandapuram Reserved Forest and southern boundary of Swamimalai Reserved Forest.)	25
Nathampalli Reserved Forest (Southern boundary)	10
Valasamalai Reserved Forest	8

APPENDIX XXXVI

THE SANDAL WORKING CIRCLE.

(a) Control of fellings.

Range :

Series :

	Prescription of Plan.		*Work done.*		*Yield.*		*Control.*	
Year.	*Coupe No.*	*Area in ha.*	*Coupe No.*	*Area in ha.*	*Number of trees.*	*Weight in tonnes and Kgs.*	*Deviation if any.*	*Authority for Deviation.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

SANDAL WORKING CIRCLE.

(*b*) FELLING SERIES JOURNAL.

***Range* :**

Series :

NOTE.—Particulars of yield obtained from enclosures should be furnished by adopting the same columns but giving the villagewise details.

Number of trees and yield from each 15 c.m. Girth classes.

		0—15 *cm.*			16—30 *cm.*			31—45 *cm.*			46—60 *cm*			61—75 *cm.*			76—90 *cm.*			91—105 *cm.*		
Year.	***Coupe* No.**	*Sap* ***wood.***	***Complete*** *trees.*	*Yield in Kgs.*	*Sap wood.*	*Complete trees.*	*Yield in Kgs.*	*Sap wood.*	*Complete trees.*	*Yield in Kgs.*	*Sap wood.*	*Complete trees.*	*Yield in Kgs.*	*Sap wood.*	*Complete trees.*	*Yield in Kgs.*	***Sap*** *wood.*	*Complete trees.*	***Yield in Kgs.***	*Sap wood.*	*Complete tress.*	*Yield in Kgs. and so on.)*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)

THE BAMBOO WORKING CIRCLE.

(*a*) CONTROL OF FELLINGS AND RECORD OF YIELD RANGE,

Range:—

Series.	Prescribed to be worked.			Actually worked.		Yield.			Control.		
	Year.	Coupe. No.	Area in ha.	Coupe No.	Area in ha.	Weight in Kgs./tonnes.)	Numbers in each class.	Revenue.	Deviation if any.	Authority for deviation.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)

FUEL WORKING CIRCLE.

(*a*) CONTROL OF FELLINGS.

Range :

Series :

Prescribed.		Worked.		Control.			Remarks.
Year.	Coupe number.	Area in ha.	Coupe number.	Year of working.	Area in ha.	Details of deviations and arrears.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

FUEL WORKING CIRCLE.

(*b*) RECORD OF YIELD AND REVENUE.

Series.	Year.	Coupe number.	Area felled.	Fire-wood number of stacks.	wt. in tns.	Timber in M3.	Revenue realised.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

THE MINOR FOREST PRODUCE WORKING CIRCLE.

(a) Record of yield (for each range).

Year.	Yield in							Tonnes and Kgs.									
	Tannin materials.				Edible fruits.			Medicinal prodcue Minerals.				Other M.F.P.					
	I				II			III		IV		V					
	Avaram bark.	Surul bark.	Konnai bark.	Kadu kai.	Tama-rind.	Cashew.	Other edible fruits (to be maintained).	Etti seeds.	Thetham seeds.	Nelli-kai.	Other items to be speci-fied.	Soap nut.	Seekai.	Beedi leaves.	Palm leaves.	Gras-ses.	Other items to be speci-fied.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)

(b) Record of revenue realised (for each range and each lease unit under M.F.P.)

Serial number	Lease unit.	Revenue realised for each year of the plan period.											
		1976-77.	1977-78.	1978-79.	1979-80.	1980-81.	1981-82.	1982-83.	1983-84.	1984-85.	1985-86.	1986 87.	1987-88.
1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
		RS. P.	RS. P.	RS. P.	RS.P.	RS.P.	RS. P.	RS. P.	RS.	RS. P.	RS. P.	RS.P .	RS. P.

(c) Control Book for M.F.P. Units.

Year.	Prescribed.		Carried out.										
	Descrip-tion.	Method of working.	Unit of lease.	Lease period.	Method of working.	Unit of lease.	Period of lease.	Yield obtained.	Gross revenue.	Expenditure incurred.	Deviations if any.	Authority for deviation.	Remarks.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)

CONTROL FORMS COMMON TO ALL WORKING CIRCLE.

(*a*) CONTROL OF FELLINGS.

(For Farm Forestry Eucalyptus Plantations teak plantations thinning, Softwood plantations and all other exploitation not covered by control forms prescribed for other working circles.

Year.	Range.	Series.	Prescribed carried out.					Revenue.	Deviation.	Authority Deviation.	Remarks.
			Coupe number.	Area in ha.	Coupe number.	Area in ha.	Yield.				
(1)	(2)	(2-a)	(3)	(4)	(5)	6)	(7)	(8)	(9)	(10)	(11)

(*b*) CONTROL OF PLANTATIONS.

Replanting of felled farm Forestry plantations and Eucalyptus felled matchwood plantations and all other planting work done but not covered by forms prescribed for other working circle.

Year.	Range.	Prescribed.			Carried out.			Deviation.	Authority for deviation.	Remarks.
		Location.	Area in ha.	Species.	Location.	Area in ha.	Species.			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)

(*c*) RECORD OF WORKS.

(Common to all working circles information already given in other control forms prescribed for specific working circles should be not repeated here.)

Year.	Prescribed.			Carried ou			Expenditure.	Outturn.	Revenue.	Remarks.
	Nature of work.	Locality Coupe number.	Area in ha.	Nature of work.	Locality Coupe number.	Area in ha.				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)

THE GRAZING WORKING CIRCLE.

(CONTROL OF GRAZING FOR EACH RANGE).

Range :

Year.	Prescription of the working Plan.		Results.		Deviation.	Authority for deviation.	Remarks.
	Total area in hec.	Area closed to grazing in ha.	Details of area closed to grazing.	Grazing revenue realised.			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

MISCELLANEOUS REGULATION.

(B) RECORD OF WORKS

Prescriptions			Works done				Deviations.	Authority for deviations.	Remarks.
Year.	Nature of work.	Brief details of work.	Year.	Nature of work.	Brief details.	Cost.			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

DEVIATION STATEMENT.

(COMMON TO ALL WORKING CIRCLES).

Year.	Serial number of deviations.	Control form number and page.	Working Plan.		Nature of deviation.	Authority for deviation.	Remarks.
			Paragraph.	Prescription.			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

APPENDIX XXXVII

I. THE EUCALYPTUS WORKING CIRCLE.

A. *Nursery.*

Comments on quantity of seeds per standard bed; Germination and plant per cent. Insecticide application and suggestion for improvement.

B. *Exploitation.*

Comments on method of exploiting the plantations, rotation, age, yield, mortality in mature plantations.

C. *Growth.*

Notes on quality and development of coppiee shoots in clearfelled plantations. Notes on density and development of the stand.

D. *Planting.*

Observation on planting time, planting technique, planting stock, fertilizer application, insecticide application, site preparation and avilability of Kumridars. Beating up of felled coupes in blanks and observations on these growth.

E. *Deviations.*

Deviations if any and justification for the same.

II. THE SANDALWOOD WORKING CIRCLE.

A. *Growing stock.*

(i) Remarks on the spread or disappearance of sandal as compared with stock maps.

(ii) Comparative remarks on tree development and heartwood production in different felling series.

(iii) Ecological observations.

B. *Factors influencing the crop.*

(i) Remarks on spike (Fresh appearance, diminution, seasonal incidence, immunity, effect on distribution of girth classes and suggestions).

(ii) Incidence of fire in sandal areas from year to year. Observations on the effect of fire on sandal tracts.

(iii) Incidence of grasing and its effect on the sandal growing stock.

(iv) Observations on the effect or theft and other forms of damage by men on the sandal crop, and suggestions for preventing them.

(v) Observations on yield fluctuations.

(vi) Comments on throughness of exploitations.

C. *Exploitation.*

(i) Observations on suitability of methods of exploitation prescribed.

(ii) Observation on the felling cycle and size of the coupe.

(iii) Abstract of the number of trees marked in each coupe and the yield obtained with remarks on the proportion of sapwood trees.

(iv) The cost of exploitation including transport charges in each felling series with explanation of variations.

(v) General remarks on the results of inspection of forest depots.

(vi) Remarks on Labour supply.

(vii) Comments on thoroughness or otherwise of extraction operations.

(viii) Full accounts of deviations made from the working Plan with detailed reasons

D. *Measures of improvement.*

(i) Observations on the growth of sandal trees in plots where tending operations are carried out.

(ii) Observations on the production of root suckers and subsequent growth from trees selected for production of root suckers and any suggestion in the improvement of the present technique in inducing more root suckers.

E. *Sandal plantations.*

(i) Comments on the suitability of planting technique and suggestions for improvement.

(ii) Observation on geramination and suggestion.

(iii) Efficacy of fencing measures proposed, and suggestion for improved fencing measures and maintenance operations.

(iv) Observation of growth of sandal tending operations carried out and remarks on the host species for sandal.

F. *Markets.*

(i) Total quantity of sandal wood marketed and revenue realised.

(ii) Statement of price obtained for each class of sandalwood.

(iii) Comments on the market in general and on fluctuation in prices.

(iv) Suggestions for reducing the number of classes of sandalwood for sale and reasons thereof.

G. *Patta sandal.*

(i) Policy and legal position.

(ii) Notes on the working of the system of exploitation.

(iii) Payments of compensation.

(iv) Activities of private sandal dealers.

III. THE BAMBOO WORKING CIRCLE.

A. *Growing stock.*

Notes and observations on growth, effect of suspension of working of bamboo coupes for rest, gregarius and sporadic flowering, natural regeneration, spread or decrease of each of the two species of bamboo in different series, etc.

B. *Factors influencing the crop.*

(i) Effects of Natural factors.

(ii) Notes on damage caused by cattle and wildlife.

(iii) Observation on human influences such as theft, fire and over exploitation.

C. *Exploitation.*

(i) Observation on suitability of the felling series and coupes with reference to facility for exploitation and availability of labour.

(ii) Notes on the workability of bamboo felling rules and implementation of agreement condition.

(iii) Notes on departmental working on bamboo plantations and suggestions for improvement.

(iv) Notes on working of coupes allotted to paper mill and condition of coupes worked by them.

(v)Details of violation by lessees and penalties levied and suggestions for prevention of recurrence of such violations.

D. *Statistics.*

Statements of yield, revenue, seigniorage, achievement in mill supply coupes with reference to targets fixed, cost of exploitation in departmental working and comments.

E. *Measures of improvement.*

Suggestion for improvement of communications and export routes.

F. *Artificial regeneration.*

(ii) Comment on technique and suggestion for improvement of technique.

(ii) Suggestions for expansion of planting areas in new arears particularly in the unreserves to be taken over on a systematic basis.

G. *Deviations.*

Reference to deviation and reasons.

IV. THE FUEL WORKING CIRCLE.

A. *Growing stock.*

Notes on growing stock, the relative fuel nature of various species and their distribution.

Notes on coppice regeneration causes for failure, influence of reason for cutting, influence of high/low cutting on regrowth, etc.

B. *Factors influencing the crop.*

(i) Notes on various forms of climate or natural damage to the crop.

(ii) Illicit fellings and other forest offences and suggestions for preventing them.

(iii) Incidence of fire and comments on the necessity for or adequacy of fire protection measures prescribed.

(iv) Suggestion for minimising damage described in items (i), (ii) and (iii).

C. *Exploitation.*

(i) Observation on the constitution and adequacy of felling series and its utlity or otherwise in meeting local demand.

(ii) Observation on suitability of rotation.

(iii) Notes on system of exploitation, lease period, coupe size.

(iv) Notes on contractors and labour supply.

(v) Notes on observation of felling rules and agreement conditions, details of violation and penalties levied.

D. *Measures of improvement.*

(i) Notes on vulnerability to fire, suggestions for better fire protection.

(ii) Remarks on the degree to which the closure to grazing is enforced and suggestions for better enforcement.

(iii) Suggestions for the improvement of communications and export routes.

E. *Markets.*

Major and minor markets for firewood extracted, prevailing market prices and position as regards demand and supply.

F. *Statistics.*

(i) Statement of out-turn realised from the felling series and comments thereon.

(ii) Statement of Prices realised per hectare and comments.

G. *Deviations.*

Full account of deviations from the working plan, if any, with detailed justifications.

V. VILLAGE FOREST WORKING CIRCLE.

A. *Exploitation.*

Comments on method of exploiting plantations, rotation, age, season of felling and lease periods, yield and revenue.

B. *GROWTH.*

Notes on quality and development of coppice shoots in clearfelled plantations. Notes on rate of growth on different types of sols, period of inundation and their effect on the growth.

C. *Plantations.*

Observations on planting time planting technique, choice of species, condition and protection of older plantations.

VI. THE HARDWOOD PLANTATION WORKING CIRCLE.

A. *Nursery.*

Comments on quantity of seeds to be sown in beds and polythene containers, germinations and plant percent of different species, watering regime, rate of growth of different species in the nursery. Insecticide application and suggestion for improvement.

B. *Growth.*

Observations of comparative growth and mortality of the different species.

C. *Planting.*

Observation on monsoon, planting time, planting technique availability of kumridars, suitable espacement, response of different species, protection problem, etc.

VII. MINOR FOREST PRODUCE WORKING CIRCLE.

A. *Exploitation.*

Comments on agency of exploitation on various items of M.F.P., duration of lease period, jurisdiction of lease units yield particulars and fluctuations thereon, departmental exploitation, etc

B. *Markets.*

Consuming centres and prevailing market rates for different items of minor forest produce.

C. *Plantations.*

Comments on nursary technique site preparation, availability of kumridars, planting technique, maintenance rate of growth condition and protection of all plantations including older ones, suggestions for cultural operations, etc.

D. *Deviations.*

Daviations, if any, and justification for the same.

VIII. GRAZING WORKING CIRCLE.

(i) Results of the implementation of the prescriptions.

(ii) Instances of violation of grazing rules (i.e.) grazing closed areas, illegal grazing, etc.

(iii) Observation on penning and penning license fees.

(iv) Grazing incidence in different localities and comments suggestions.

(v) Observations on improvements to watering facilities, pen hygene, immunisation of cattle against diseases, and other topics concerned with grazing.

IX. MISCELLANEOUS PRESCRIPTIONS.

1. *Fire Protection.*

(i) Remarks on the implementation of fire protection measures with suggestions for possible change.

(ii) Remarks on the working of fire reward system—suggestion for change in matter of reward.

(iii) Amount spent, length fire traced and area burnt in each Range.

2. *Boundaries.*

Remarks on implementation of prescriptions and comments. Progress made in boundary verification with details, survey and observation on demarcation of unreserves notified under section 26 of the Tamil Nadu Forest Act.

3. *Roads.*

Details of new roads formed. Observation on maintenance of roads and extraction paths formed by lessees in the forests. Remarks on the implementation of prescriptions and comments on the prescription. Details of metalling and maintenance work, etc., done and costs.

4. *Buildings.*

Details of building constructed with cost comments on type design, availability of building materials, labour and probable utility value of building. Details of renovations and major repairs.

5. *Wild Life.*

Extent of areas closed to shooting. Comments and observations on practicability and efficiency of the closure. Observations on population trend among wildlife species with remarks in vanishing species. Suggestions on the enforcement of Wild Life Presumption Act of 1972, violation of Wild Life Act and penalties imposed. Suggestions for improvements to develop wild life population, etc.

6. *Teak Plantations.*

Nature of thinning and other cultural operation carried out to older teak plantations, intermediate yield, avenue and expenditure, response to thinning-comments.

7. *Matchwood plantations.*

Observations on oldar plantations, and suggestions for improvement and exploitation.

8. *Forest protection.*

Brief notes on major offences detected and suggestions, conduct of staff, offences detected by special mobile parties, vulverable areas difficulties experienced and suggestions.

9. *Establishment.*

Suggestions for re-organisation of beats sections and Ranges. Adequacy of staff, quality and competence of ministrial staff, general discipline and details of disciplinary actions.

10. *Education.*

Scope for training more staff, educational facilities to tribals, improvements to Forest Schools, etc.

11. *Nature Reserves.*

Brief notes on the condition and maintenance of 'Nature Reserve' and any suggestions.

12. *General.*

Additions and disreservations with details of authority. Land leases and mining leases and suggestions.

APPENDIX XXXVII.

BOTANICAL LISTS.

(*a*) ARRANGED ALPHABETICALLY ACCORDING TO GENERA.

Botonical name.	*Tamil name.*	*Natural order.*
	A. trees.	
Acacia arabica	Karuvela maram	Leguminosae
Acacia ferruginea	Paramba maram	Do.
Acacia leucophloea	Vel-Velammaram, sarai maram	Do.
Acacia lenticularis	..	Do.
Acacia pennata	Kattusikai	Do.
Acacia senegal	..	Do.
Acacia suma	Celai	Do.
Acacia sundra	Karungali maram	Do.
Adina cordifolia	Manjakadambai maram	Rubiaceae.
Aegle marmelos	Vilva maram	Rutaceae.
Ailanthus excelsa	Pee maram, Pee narimaram	Simarubaceae.
Alangium lamarckii	Alingi maram	Cornaceae.
Albizzia amara	Thuringi maram	Leguminosae.
Albizzia lebbeck	Kattu-vagai maram	Do.
Albizzia odoratissima	Karu-vagai maram, Kal-thuringi maram	Do.
Albizzia procera	Nal-velangu maram, Selai maram	Do.
Alseodaphne semecarpifolia	Kaka-nagai maram	Lauraceae.
Alstonia scholaris	Palagaruda maram	Apocynaceae.
Anacardium occidentale	Mundiriparuppu maram	Anacardiaceae.
Anogeissus latifolia	Namai maram	Combretaceae.
Anogeissus acuminata	Do.	Do.
Anona reticulata	Rama-palam maram	Anonaceae.
Anona squamosa	Seetha-palam maram	Do.
Artocarpus heterophyllus	..	Do.
Artocarpus integrifolia	Palamaram	Moraceae.
Balanites roxburghii	Manjunda maram	Simarubaceae.
Balsamodendron berryi	Mul-kilvai maram	Burseraceae.
Bassia latifolia	Illuppai maram	Sapotaceae.
Barringtonia acutangula	Kadappay maram	Myrtaceae.
Bauhinia racemosa	Chitha acha maram	Leguminosae.
Bombax malabaricum	Eleva maram	Malvaceae.
Borassus flabellifer	Panai maram	Palmaceaee.
Boswellia serrata	Dhupam maram, Kungiliam maram	Burseraceae.
Bridelia montana	Mullu-vengai maram	Euphorbiaceae
Bridelia retusa	Do.	Do.
Buchanania latifolia	Sara paruppu maram	Anacardiaceae.
Buchanania lanceolata	Muda malai maram	Do.
Butea frondosa	Porasu, Murunku maram	Leguminosae.
Canthium didymum	Naluvai, Nekkini maram	Rubiaceae.
Careya arborea	Kalkambi maram	Myrtaceae.

APPENDIX—XXXVIII—*cont.*

BOTANICAL LIST—*cont.*

Botanical name. (1)	*Tamil name.* (2)	*Natural order.* (3)
Caryota urens	Kundalpanai maram	Palmaceae.
Casearia tomentosa	..	Samydaceae.
Cassia fistula	Konnai maram	Leguminosae.
Cassia siamea	Karum-konnai maram, Pon-arvarai	Do.
Cassia montana	Malaiavaram	Leguminosae.
Casuarina equisetifolia	Chowk maram	Casuarinaceae.
Chloroxylon swietenia	Porasu, Borasum maram	Rutaceae.
Chukrasia tabularis	Arnnelli maram	Meliaceae.
Citrus medica	Elumuchi maram	Rutaceae.
Cleistanthus collinus	Woddan maram	Euphorbiaceae.
Cochlospermum gossypium	Odina maram, Senthanakku	Bixaceae.
Cordia myxa	Neravali maram	Boraginaceae.
Crataeva religiosa	Mavilangai maram	Capparidaceae.
Dalbergia lanceolaria	Velangu maram	Leguminosoe.
Dalbergia latifolia	Etti maram	Do.
Dalbergia paniculata	Pachalai maram	o.
Dalbergia sissoides	Sissoo maram	Do.
Dalbergia sissoo	Do.	Do.
Delonix elata	Vatanarayana maram	Do.
Dichrostachys cineria	Vedadara Veduthalam maram	Do.
Diospyros chloroxylon	Karuvakkanai maram	Ebenaceae.
Diospyros melanoxylon	Thumbi, Karum-thumbi maram	Do.
Diospyros montana	Vakkanai maram	Do.
Diospyros ovalifolia	Kadu-thoomparai maram	Do.
Dolichandrone crispa	..	Bignoniaceae.
Dolichandrone falcata	Klarvalathu maram	Do.
Ehretia ovalifolia	Aduthinnapalai	Boraginaceae.
Elaeodendron glaucum	Keeri maram, Veeri maram	Celastraceae.
Enterolobium saman	Mal, Thungammunji maram	Leguminosae.
Eriodendron anfractuosum	Poola maram	Malvaceae.
Erythrina indica	Mulmurukku maram	Leguminosae.
Erythrina suberosa	Murukku maram	Do.
Erythroxylon monogynum	Chembulicha maram	Linaceae.
Eugenia jambolana	Nagai maram	Myrtaceae.
Euphorbia trigona	Pal-kalli maram	Euphorbiaceae.
Feronia elephantum	Vilva maram	Rutaceae.
Ficus bengalensis	Alai maram	Moraceae.
Ficus arnottiana	Kodi arasu	Do.
Ficus gibbosa	..	Do.
Ficus glomerata	Athimaram	Do.

Botanical name. (1)	*Tamil name.* (2)	*Natural order.* (3)
Ficus hispida	Chon-athi maram	Do.
Ficus religiosa	Arasa maram	Do.
Ficus retusa	Kalluichi maram	Do.
Ficus tsiela	Kalluathi maram	Moraceae
Gelonium lanceolatum	Kakaipalai	Euphorbiaceae.
Gardenia gummifera	Kambili-pisina maram	Rubiaceae.
Gardenia latifolia	Kothu marikalam maram	Do.
Garuga pinnata	Karu vembu maram	Burseraceae.
Givotia rottleriformis	Velthadi maram	Euphorbiaceae.
Gmelnia arborea	Kummulam maram	Verbanaceae.
Grewia tiliaefolia	Thadachi, Thadasu maram	Tiliaceae.
Gyrocarpus americanus (*Jacquini*)	Kosu-thanaku maram	Hernandiaceae.
Hardwickia binata	Acha maram	Leguminosae.
Holarrhena antidysenterica	Karupalai maram (Godachalimaram)	Apocynaceae.
Holoptelea integrifolia	Thavasi maram	Ulmaceae.
Hymenodictyon excelsum	Nerkadambu maram	Rubiaceae.
Ixora parviflora	Kora maram	Do.
Kydia calycina	Pulabendi maram	Malvacoeoe.
Lagerstroemia lanceolata	Ventheku. Chinnarigimaram	Lythraceae.
Lagerstroemia parviflora	Pe-Kadukkai maram	Do.
Lannea grandis	Odian maram	Anacardiaceae.
Limonia acidissima	Narivala maram	Rutaceae.
Limonia crenulata	Navala maram	Do.
Linociera intermedia	Elukkanalu maram	Oleaceae.
Litsea chinensis	Pisinpatty	Lauraceae.
Litsea deccanensis	Perumbandali	Lauraceae
Maba buxifolia	Chinnerumboli maram	Ebenaceae.
Mallotus philippinensis	Kamalapodi maram	Euphorabaceae.
Mangifera indica	Mamaram	Anacardiaceae.
Melia composita		Meliaceae.
Melia indica	Vepa maram	Do.
Melia dubla	Malavembu marqm	Do.
Memecylon umbellatum	Perum kasanmaram	Melastomaceae.
Memecylon edule	Kasan maram	Do.
Millingtonia hortensis	mara-malli maram	Bignoniaceae.
Mimusops elengi	Magadam maram	Sapotaceae.
Mimusops hexandra	Palaemaram	Do.
Mitragyna parvifolia (*stephegyne*)]	Nirkadambai maram	Rubiaceae.
Morinda citrifolia	Nona maram	Do.
Morinda tinctoria	Majanathi nonamaram	Do.
Moringa concanensis	Kattumurungai maram	Moringaceae.
Moringa pterygosperma	Murugai maram	Do.
Murraya exotica	Kattukaruvappalai maram	Rutaceae.
Murraya koinigi	Karuvappalai maram	Do.

Botanical name. (1)	Tamil name. (2)	Natural order. (3)
Neolitsea zeylanica	Shembagapalai	Lauraceae.
Odina wodier	Oodai maram	Anacardiaceae.
Olea dioica	Koli maram	Oleaceae.
Olea glandulifera	Kattu Kallari maram	Do.
Ougeinia dalbergioides	Naipoonai maram	Leguminosae.
Phoenix sylvestris	Eecha maram	Palmaceae.
Phyllanthus emblica	Nelljmaram	Euphorbiaceae.
Phyllanthus Polyphyllus	..	Do.
Pistacia oleosa	Kadal-muruchimaram	Sapindaceae.
Pithecolobium dulce	Kodukapuli maram	Leguminosae.
Pithecolobium saman	Seemai kothivao maram	Do.
Pittosporum floribundum	Thamattan maram	Pittosporaceae.
Pleurostylia wightii	..	Celastraeceae.
Plumeria acutifolia	Navilla maram	Apocynaceae.
Polyalthia cerasoides	Kotha kala maram	Anonaceae.
Pongamia glabra	Punga maram	Leguminosae.
Premna tomentosa	Kolakattaithekumaram, Pudanganari	Verbenaceae.
Protium caudatum	Pachaikilvai maram	Burseraceae.
Psiduium guajava	Koyappala maram	Myrtaceae.
Pterocarpus marsupium	Vengai maram	Leguminosae.
Pterospermum heyneanum	Udupai maram	Sterculiaceae.
Pterocarpus santalinus	Chem-maram	Leguminosae.
Pterospermum suberifolium	Muruvankai maram	Sterculiaceae.
Randia brandisii	Perum-karai maram	Rubiaceae.
Randia uliginosa	Vagatta maram	Do.
Hydnocarpus wightiuna	Maranathi maram	Bixaceae.
Santalum album	Sandana maram	Santalaceae.
Sapindus emarginatus	Puvamkottai maram	Sapindaceae.
Sapindus laurifolus	Kavadipoongai maram	Do.
Schleichera trijuga	Pulichi maram	Do.
Schrebera swietenioides	Mogalinga maram	Oleaceae.
Semecarpus anacardium	Seram-kottai maram	Anacardiaceae,
Shorea talura	Jaleri maram	Dipterocarpaceae.
Soymida febrifuga	Sombupattai maram	Meliaceae.
Sterculia villosa	Kottai thanukumaram	Sterculiaceae.
Sterculia urens	Senthanaku maram	Do.
Stereospermum chelonoides	Poom padiri, Kollati maram	Bignoniaceae.
Stereospermum suaveolens	Padri maram	Do.
Stereospermum xylocarpum	Vedam-Kurumai, Kodalatti maram	Do.
Streblus asper	Kuttipala maram	Moraceae.
Strychnos nux-vomica	Etti maram	Leguminosae.
Strychnos potatorum	Thethankottaimaram	Do.

Botanical name. (1)	*Tamil name.* (2)	*Natural order.* (3)
Tamarindus indica	Pulia maram	Do.
Tectona grandis	Theku maram	Verbenaceae.
Terminalia arjuna	Maddi, Nermaddi maram	Combretaceae.
Terminalia belerica	Thani, Thandi maram	Do.
Terminalia chebula	Kadukai maram	Do.
Terminalia paniculata	Pillamarudu, Puluvaimaram	Do.
Thevetia neriifolia	*Thiruvachimaram*	Apocynaceae.
Terminalia tomentosa (crenulata)	Karumarudu maram	Combretaceae.
Thespesia populnea	Puvarasu maram	Malvaceae.
Trema orientalis	Amparuthi	Ulmaceae.
Trewia nudiflor	Kumbla maram	Euphorbiaceae.
Vitex altissima	Mayil-adi maram	Verbenaceae.
Vitex negundo	Nochi maram	Do.
Wrightia tinctoria	Palai maram	Apocynaceae.
Wrightia tomentosa	Veppalai maram	Do.
Zizyphus jujuba	Yelandai maram	Rhamnaceae.
Zizyphus xylopyru	Mul-upai-maram	Do.

B—BAMBOOS.

Bambusarundinacea	Peruvarai moongil	Gramineae.
Dendrocalamus strictus	Siruvarai moongil	Do.

C—SHRUBS.

Acacia latronum	Kodi velam	Leguminosae.
Acalypha fruticosa	Cinni	Euphorbiaceae.
Adhatoda vasica	Adathodai	Acanthaceae.
Aeschynomene aspera	Netti	Leguminosae.
Allophylus cobbe	Siru-sale	Sapindaceae.
Allophylus serratus	Kuva-koothi	Do.
Aloe vera	Kathali	Liliaceae.
Atalantia monophylla	Kattuelimichi	Rutaceae.
Breynia rhamnoides	Sigappu poola	Euphorbiaceae.
Carissa spinarum	Sirukila	Apocynaceae.
Calotropis gigantea	Yerukku	Asclepiadaceae.
Canthium parviflorum (Plectronia)	Sengarai	Rubiaceae.
Capparis sepiaria	Kattukatheri	Capparidaceae.
Carissa carandas	Kila, cherumikila	Apocynaceae.
Cassia auriculata	Avaram, avarai	Leguminosae.
Cassia occidentalis	Pon-avarai	Do.
Cassia tora	Thagara, oosithagara	Do.
Chomelia asiatica	Thirani	Rubiaceae.
Cipadessa fruticosa	Savatu-chedi	Meliaceae.
Clausena indica	Nana	Rutaceae.

Botanical name. (1)	Tamil name. (2)	Natural order. (3)
Croton lawianus	Kottai-manakku	Euphorbiacae.
Gymnosporia heyneana	Kattanji	Celastraeceae.
Gymnosporia montana	Kattanji	Celastraceae.
Datura fastuosa	Veloomathu	Solanaceae.
Datura stramonium	Oomathu	Do.
Desmodium pulchellum	Narjuruvi	Leguminosae.
Dodonea viscosa	Vellari	Sapindaceae.
Ehretia buxifolia	Kuravanji	Boraginaceae.
Flacourtia ramontchi	Kothu vela	Bixaceae.
Flacourtia sepiaria		Do.
Flemingia chappar		Leguminosae.
Fluggea leucopyrus	Kottu veppulam	Euphorbiaceae.
Fluggea microcarpa	Vellaipoola	Do.
Grewia hirsuta		Tiliaceae.
Grewia columnaris		Do.
Helicteres isora	Valamburi, Idampuri	Sterculiaceae.
Hemicyclia sepiaria	Virai Velliambu	Euphorbiaceae.
Hemidesmus indicus	Nannari	Asclepiadaceae.
Hiptage madablota	Madu-malati, Kuruvath	Malpighiaceae.
Indigofera paucifolia	Poola	Leguminosae.
Jatropha curcas	Kattua amanakku	Euphorbiaceae.
Lantana indica (camara)	Unni	Verbenaceae.
Lawsonia inermis	Aivanam	Lythraceae.
Mimosa rubicaulis	Kattu-seekai	Leguminosae.
Nyctanthes arbortristis	Pavelum	Oleaceae.
Ocimum gratissimum	Thulasi	Labiateae.
Ocimum sanctum	Karunthulasi	Do.
Opuntia dillenii	Mullukalli, Nathali	Cactaceae.
Pandanus tectorius	Thalai	Pandanaceae.
Paramignya monophylla	Molongarni	Rutaceae.
Pavetta indica	Pavattai	Rubiaceae.
Pavonia zeylanica		Malvaceae.
Phoenix acaulis	Eechampul	Palmaceae
Phoenix humilis	Siringi	Do.
Plumbago zeylanica		Plumbaginaceae.
Randia dumetorum	Karai, marivalan, marakalam	Rubiaceae.
Rhamnus wightii		Rhamnaceae.
Rhusmy sorensis	Chippa maram	Anacardiaceae.
Rhus lineatus		Do

Botanical name. (1)	Tamil name. (2)	Natural order. (3)
Scutia indica	Kokki mullu	Rhamnaceae·
Strobilanthus	Kurungi	Acanthaceae.
Solanum gigateum	Sambal kiluvai	Solanaceae.
Solanum trilobatum	Sundakkai	Do.
Solanum verbascifolium	Anaisundakkai	Do.
Solanum xanthocarps	Kandamkathiri	Do.
Tephrosea purpurea (mendulsa suberosa)	Kavali	Leguminosae.
Toddalea asiatica	Molacarnai	Rutaceae.
Toddalea aculeata	Kattu molaga, Porivalan	Do.
Webera asiatica	Chintharni	Rubiaceae.
Webera corymbosa	Tharni	Do.
Ximenia americana	Kale	Oleaceae.
Zingiber casumunar	Kattamanjal	Zingiberaceae
Zizyphus nummularia	Nari-yelandai	Rhamnaceae.
Zizyphus oenopolia	Soorai	Do.
Zizyphus glabrata	Kottaiyelandai	Do

D—CLIMBERS.

Botanical name. (1)	Tamil name. (2)	Natural order. (3)
Acacia caesia	Karikaran, Vellandu	Leguminosae.
Acacia concinna	Seekayi	Do.
Acacia intsia	Indu-mullu	Do.
Ampelocissus latifolia	Kattukodimundari	Vitaceae
Abrus precatorius	Kundumani	Leguminosae.
Abrus pulchellus	Vellai kundumani	Do.
Argyreia speciosa	Kalkattan	Convolvulaceae.
Aristolochia indica	....	Aristolochinaceae.
Asparagus racemosus	Thannuta kodi	Liliaceae.
Bauhinia vahlii	Kattumandarai	Leguminosae.
Butea superba		Do.
Caesalpinia bonducella	Gajjikai, **Kala**chikai	Do.
Canavalia virosa		Do.
Celastrus paniculata		Celastraeceae.
Cissus quadrangularis	perndai	Vitaceae.
Cocculus villosus	Kottkodi	Menispermaceae.
Combretum ovalifolium	Vennangu kodi	Combretaceae.
Cuscuta	....	Convolvulaceae.
Derris scandens	Punali	Leguminosae.
Dioscorea hispida	Kanalkodi	Dioscoriaceae.
Dscoiorea pentaphylla	Kattuvelli	Do.
Gosriolo superba	Kannou	Liliaceae.

Botanical name. (1)	*Tamil name.* (2)	*Natural order.* (3)
Gymnema sylvestre	Siru-Palai kodi	Asclepiadaceae.
Hugonia mystax	Kodi veerai	Linaceae.
Ichnocarpus furtesnces	Oothalkodi	Apocynaceae.
Jasminum abrorescens	Kattumalligai	Oleaceae.
Lettsomia elliptica	Onan kodi	Convolvulaceae.
Millettia auriculata		Leguminosae.
Mucuna gigantea	Kakavalli	Do.
Naravelia zeylanica	Naruvalan kodi	Ranunculaceae.
Pergularia extensa	Seedakodi	Asclepiadaceae.
Pterolobium indicum	Kari-indi-pulithadiki	Leguminosae.
Secamone emetica	Seeraikodi	Do.
Smilax zeylanica		Liliaceae.
Spatholobus roxburghii	Kattu avarai kodi	Leguminosae.
Uvaria narum	Kattu valai	Anonaceae.
Ventilago calyculata	Surai, Vembalam	Rhamnaceae.
Ventilago madraspatana	Vembalam	Do.

(b) *Arranged alphabetically according to Tamil Name.*

Tamil name. (1)	*Botanical name.* (2)	*Natural order.* (3)
Achamaram	*Hardwickia binata*	Leguminosae.
Aalai maram	*Ficus bengalensis*	Moraceae.
Alingi maram	*Alangium lamarckii*	Cornaceae.
Arasa maram	*Ficus religiosa*	Moraceae.
Arunelli maram	*Chukrassia tabularis*	Meliaceae.
Athi maram	*Ficus glomerata*	Moraceae.
Vilva maram	*Aegle marmelos*	Rutaceae.
Borasu maram	*Chloroxylon swietenia*	Rutaceae.
Chembulich maram	*Erythroxylon monogynum*	Linaceae.
Chem maram	*Pterocarpus sanatalinus*	Leguminosae.
Chinerumboli maram	Maba buxifolia	Ebenaceae.
Kuttipala maram	*Streblus asper*	Moraceae.
Chinnarigi maram (ventheku)	*Lagerstroemia lanceolata*	Lythraceae.
Senthanaku maram	Sterculia urens	Sterculiaceae.
Chitha acha maram	Bauhinia racemosa	Leguminosae
Chon athi maram	Ficus hispida	Moraceae.
Chowk maram	Casuarina equisetifolia	Casuarinaceae.
Dhupam maram	Boswellia serrata	Burseraceae.
Eacha maram	Phoenix sylvestris	Palmaceae
Eetti maram	Dalbergia latifolia	Leguminosae.
Ellu-Kanalu maram	Linoceirerira intermedia	Oleaceae.

Tamil name. (1)	*Botanical name.* (2)	*Natural order.* (3)
Elumuchi maram	Citrus medica	Rutaceae.
Elava maram	Bombax malabaricum	Malvaceae.
Etti maram	Strychnos nux-vomica	Leguminosae.
Godachali maram Karupalai maram	Holarrhoenaantidysenterica	Apocynaceae.
Illuppai maram	*Bassia latifolia*	Sapotaceae.
Jaleri maram	*Shorea talura*	Dipterocarpaceae.
Kadal-murichi maram	*Pistacia oleosa*	Sapindaceae.
Kadalatti maram	*Stereospermum xylocarpum*	Bignoniaceae.
Kaddapay maram	*Barringtonia acutangula*	Myrtaceae.
Kadukai maram	*Terminalia chebula*	Combretaceae.
Kadu-thoomparai maram	*Diospyros ovalifolia*	Ebenaceae.
Kaka-nagai maram	*Alseodaphne semicarpifolia*	Lauraceae.
Kalkambi maram	*Careya arborea*	Myrtaceae.
Kalthuringi maram	*Albizzia odoratissima*	Leguminosae.
Kall-athi maram	*Ficus tsiela*	Moraceae.
Kalluichi maram	*Ficus retusa*	Do.
Kamalapodi maram	*Mallotus philipinensis*	Euphorbiaceae.
Kambilipisina maram	*Gardenia gummifera*	Rubiaceae.
Karu-vagai maram	*Albizzia odoratissima*	Leguminosae.
Karum-konnai maram	*Cassia siamea*	Do.
Karumgalai maram	*Acacia sundra*	Do.
Karuveppalai maram	*Murraya Konigii*	Rutaceae.
Karu-Mardu maram	*Terminalia tomentosa*	Combretaceae.
Karuvakkanai maram	*Diospyros chloroxylon*	Ebenaceae.
Karum-thumbai maram	*Diospyros melanoxylon*	Do.
Karuvela maram	Acacia *arabica*	Leguminosae.
Karupalai maram	*Holarrhoena antidysentecica*	Apocynaceae.
Karuvembu maram	*Garuga pinnata*	Burseraceae.
Kavadipoongai Maram	*Sapindus laurifolius*	Spindaceae.
Kasan Maram	Memecylon *edule*	Melastomaceae.
Kattu-Kalleri Maram	*Olea glandulifera*	Oleaceae.
Kattukaruveppalai Maram	*Murraya exotica.*	Rutaceae.
Kattu murunga iMaram	*Moringa concanensis*	Moringaceae.
Kattu-vagai Maram	*Albizzia Lebbeck*	Leguminosae.
Keeri Maram	*Elaeodendron glaucum*	Celastraceae.
Klarvalathu Maram	*Dolichandrone falcata*	Bignoniaceae.
Kodukkapuli Maram	*Pithecolobium dulce*	Leguminosae.
Kolakattai theku Maram	*Premna tomentosa*	Verbenaceae.
Koli Maram	*Olea dioica*	Oleaceae.
Konnai-Maram	*Cassia fistula.*	Leguminosae.
Kora Maram	*Ixora parviflora*	Rubiaceae.

Tamil name. (1)	*Botanical name.* (2)	*Natural order.* (3)
Kosu-thamaku Maram	*Gyrocarpus americanus (jacquini)*	Hernandiaceae.
Kothu-marikalan Maram	*Gardenia latifolia*	Rubiaceae.
Kattai-thanaku Maram	*Sterculia villosa*	Sterculiaceae.
Koyyapala Maram	*Psidium guajava*	Myrtaceae.
Kothu-kala Maram	*Polyalthia cerasoides*	Anonaceae.
Kumbla Maram	*Trewia nudiflora*	Euphorbiaceae.
Kumalam Maram	*Gmelina arborea*	Verbenaceae.
Kundalpanai Maram	*Caryota urens*	*Palmaceae.*
Kungiliam Maram	*Boswellia serrata*	Burseraceae.
Kuttipala Maram	*Streblus asper*	Moraceae.
Maddi Maram	*Terminalia arjuna*	Combreteacea.
Pillamaradu	*Terminalia paniculata*	Do.
Magadam Maram	*Mimusops elengi*	Sapotaceae.
Mal Maram	*Enterobloium saman*	Leguminosae.
Malavembu Maram	*Melia dubia*	Maliaceae.
Mamaram	*Mangifera indica*	Anacardiaceae.
Manjanathinona Maram	*Morinda tinctoria*	Rubiaceae.
Manjakadambai Maram	*Adinacordifolia*	Do.
Manjunda Maram	*Balanites roxburghii*	Simarubaceae.
Maramalli Maram	*Millingtonia hortensis*	Bignoniaceae.
Mara-Mathi Maram	*Bauhinia racemosa*	Leguminosae.
Maravatti Maram	*Hydnocarpus wightiana*	Bixaceae,
Mavilangai Maram	*Crataeva religiosa*	Capparidaceae.
Mayil-adi Maram	*Vitex altissima*	Verbenaceae.
Mogalinga Maram	*Schrebera swetenioudes*	Oleaceae.
Muda Mali Maram	*Buchanania lanceolata*	Anacardiaceae.
Mul-upai Maram	*Zizyphus xylopyrus*	Rhamnaceae.
Mul-kilavi Maram	*Balsamoderndron berryi*	Burseraceae.
Mullu-vengai Maram	*Bridelia retusa*	Euphorbiaceae.
Do.	*Bridellia montana*	Do.
Mulmurukku Maram	*Erythrina indica*	Leguminosae.
Mundiriparuppu Maram	*Anacardium occidentale*	Anacardiaceae.
Murukku Maram	*Erythrina suberosa*	Leguminosae.
Murunku Maram	*Butea frondosa*	Do.
Murumgai Maram	*Muringa pterygosperma*	Moringaceae.
Muruvankai Maram	*Pterospermum suberifolium*	Sterculiaceae.
Nagai Maram	*Eugenia jambolana*	Myrtaceae.
Naiponnai Maram	*Ougenia dalbergioides*	Leguminosae.
Naluvai, Nekkini Maram	*Canthium didymum*	Rubiaceae.
Nalvala Maram	*Limonia crenulata*	Rutaceae.
Nal-velangu Maram	*Albizzia procera*	Leguminosae.

Tamil name. (1)	*Botanical name.* (2)	*Natural order.* (3)
Namai Maram	*Anogeissus latifolia*	Combretaceae.
Do.	*Anogeissus acuminata*	Do.
Narivala Maram	*Limonia acidissima*	Rutacae.
Navila Maram	*Plumeria acutifolia*	Apocynaceae.
Nelli Maram	*Phyllanthus emblica*	Euphorbiaceae.
Nervali Maram	*Cordia myxa*	Boraginaceae.
Nerkadamba Maram	*Hymenodictyon excelsum*	Rubiaceae.
Nermaddi Maram	*Terminalia arjuna*	Combretaceae.
Nirkadambai Maram	*Mitragyna parviflolia* (*Stephegyne*)	Rubiaceae.
Nona Maram	*Morinda citrifolia*	Do.
Nochi Maram	*Vitex negundo*	Verbenaceae.
Odina Maram	*Cochlospermum gossypium*	Bixaceae.
Odian Maram	*Lannea grandis*	Anacardiaceae.
Oodai Maram	*Odina wodier*	Do.
Pachali Maram	*Dalbergia paniculata*	Leguminosae.
Pachai-Kilvai Maram	*Protium caudatum*	Burseraceae.
Padri Maram	*Stereospermum suaveolens*	Bignoniaceae.
Palai Maram	*Mimusops hexandra*	Sapotaceae.
Pala-garuda Maram	*Alstonia scholaris*	Apocynaceae.
Palai Maram	*Wrightia tinctoria*	Do.
Palkalli Maram	*Euphorbia trigona*	Euphorbiaceae.
Panai Maram	*Borassus flabellifer*	Palmaceae.
Paramba Maram	*Acacia ferruginea*	Leguminosae.
Pee Maram	*Ailanthus excelsa*	Simarubaceae.
Pee-nari Maram	Do.	Do.
Pela Maram	*Artocarpus integrifolia*	Moraceae.
Pe-kadukkai Maram	*Lagerstroemia parviflora*	Lythraceae.
Perum-karai Maram	*Randia brandisii*	Rubiaceae.
Perum-kasan Maram	*Memecylon umbellatum*	Melastomaceae.
Pillamarudu Maram	*Terminalia paniculata*	Combretaceae.
Pon-avarai Maram	*Cassia siamea*	Leguminosae.
Poola Maram	*Eriodendron anfractuosum*	Malvaceae.
Puvamkottai Maram	*Sapindus emarginatus*	Sapindaceae.
Porasu Maram	*Butea frondosa.*	Leguminosae.
Porasu Maram	*Chloroxylon swietenia*	Ruaceae.
Poompadiri Maram	*Stereospermum chelonoides*	Bignoniaceae.
Pulabendi Maram	*Kydia calycina*	Malvaceae.
Pulchi Maram	*Schleichera trijuga*	Sapindaceae.
Pulia Maram	*Tamarindus indica*	Leguminosae
Punga Maram	*Pongamia glabra*	Do.
Puvarasu Maram	*Thespesia poulnea*	Malvaceae.

Tamil name. (1)	*Botanical name.* (2)	*Natural order.* (3)
Rama-Palam Maram	*Anona reticulata*	Anonacae.
Sandana Maram	*Santalum album*	Santalaceae.
Sara-parappu Maram	*Buchanania latifolia*	Anacardiaceae.
Sarai Maram	*Acacia leucophloea.*	Leguminosae.
Seemaikothuvai Maram	*Pithecolobium saman*	Do.
Seetha-palam Maram	*Anona squamosa*	Anonaceae.
Seram-Kottai Maram	*Semecarpus anacardium*	Anacardiaceae.
Sisoo Maram	*Dalbergia sissoides*	Leguminosae.
Do.	*Dalbergia sissoo*	Do.
Sombupatai Maram	*Soymida febrifuga*	Meliaceae.
Thadachi Maram	*Grewia tiliaefolia*	Tiliaceae.
Thadasu Maram	Do.	Do.
Thammattan Maram	*Pittosporum floribundum*	Pittosporaceae.
Thandri Maram	*Terminalia belerica*	Combretaceae.
Thani Maram	Do.	Do.
Thavasi Maram	*Holoptelia integrifolia*	Ulmaceae.
Theku Maram	*Tectona grandis*	Verbenaceae.
Thethankottai Maram	*Strychnos potatorum*	Liguminosae.
Thiruvachipu Maram	*Thevetia nertifoiia*	Apocynaceae.
Thumbi Maram	*Diospyros melanoxylon*	Ebenaceae.
Thungummunji Maram	*Enterolobium saman*	Leguminosae.
Thurinji Maram	*Albizzia amara*	Do.
Udupai Maram	*Pterospermum heyneanum*	Sterculiaceae.
Vagatta Maram	*Randia uliginosa*	Rubiaceae.
Vekkanai Maram	*Diospyros montana*	Ebenaceae.
Vatanarayana Maram	*Delonix elata*	Leguminosae.
Vedadaram Maram	*Dichrostachys cineria*	Do.
Vedamkurunai Maram	*Stereosermum xylocarpum*	Bignoniaceae.
Veduthalam Maram	*Dichrostachys cineria*	Leguminosae.
Veerai Maram	*Elaeodendron glaucum*	Celastraceae.
Velangu Maram	*Dalbergia lanceolata*	Leguminosae.
Velthadai Maram	*Givotia rottleriformis*	Euphorbiaceae
Velvelam Maram	*Acacia leucophloea*	Leguminosae.
Vengai Maram	*Pterocarpus marsupium*	Do.
Ventheku Maram	*Lagerstroemia lanceolata*	Lythraceae.
Vepa Maram	*Melia indica*	Meliaceae.
Veppalai Maram	*Wrightia tinctoria*	Apocynaceae.
Vilva Maram	*Feronia elehantum*	Rutaceae.
Wooddan Maram	*Cleistanthus collinus*	Euphorbiacea.
Yelendai Maram	*Zizyphus jujuba*	Rhamnaceae

Tamil name. (1)	*Botanical name.* (2)	*Natural order* (3)
	B. BAMBOO	
Peruvarai Moongil	*Bambusa arundinacea*	Gramineae.
Siruvarai Moongil	*Dendrocalamus strictus*	Do
	C. SHRUBS.	
Adathodai	*Adhatoda vasica*	Acanthaceae.
Aivanam	*Lawsonia inermis*	Lythraceae.
Anaisundakkai	*Solanum verbascifolium*	Solanaceae.
Avaram	*Cassia auriculata*	Legumincsae.
Avarai	Do.	Do.
Cherumkila	*Carissa carandas*	Apocynaceae.
Chintharni	*Webera asiatica*	Rubiaceae.
Chippa Maram	*Rhus mysorensis*	Anacardiaceae.
Cinni	*Acalypha fruticosa*	Euphorbiaceae.
Eechampul	*Phoenix acaulis*	Palmaceae.
Idamburi	*Helicteres isora*	Sterculiaceae.
Kale	*Ximenia americana*	Oleaceae.
Kandamkathari	*Solanum xanthocarpus*	Solanaceae.
Karai	*Randia dumetorum*	Rubiaceae.
Karum-thulasi	*Ocimum sanctum*	Labiateae.
Kathali	*Aloe vera*	Liliaceae.
Kattanji	*Gymnosporia montana*	Celastraeceae.
Do.	*Gymnosporia heyneana*	Do.
Kattu elimichi	*Atlantia monophylla*	Rutaceae.
Kattu manjal	*Zingiber casumunar*	Zingiberaceae.
Kattu molaga	*Toddalia aculeata*	Rutaceae.
Kattu seekai	*Mimosa rubicaulis*	Leguminosae.
Kattu kathiri	*Capparis sepiaria*	Capparidaceae.
Kattu amanakku	*Jatropha curcas*	Euphorbiaceae.
Kavali	*Tephrosea pprpurea (Mundulsa suberosa).*	Leguminosae.
Kila	*Carissa carandas*	Apocynaceae.
Kodivelam	*Acacia latronum*	Leguminosae.
Kokki mullu	*Scutia indica*	Rhamnaceae.
Kothu vela	Flacourtia *ramontchi*	Bixaceae.
Kottai-yelandai	*Zizyphus glabrata*	Rhamnaceae.
Kottai-manakku	*Croton lawianus*	Euphorbiaceae.
Kottu veppulam	*Fluggea leucopyrus*	Do.
Kurungai	*Strobilanthus*	Acanthaceae.
Kuruvanji	*Ehretia buxifolia*	Boraginaceae.
Kuva Koothi	*Allaphylus serratus*	Sapindaceae.

Tamil name. (1)	*Botanical name.* (2)	*Natural order.* (3)
Mudu-malathi	*Hiptage madablota*	Malpighiaceae.
Marakalam	*Randia dumetorum*	Rubiaceae.
Marivalan	Do.	Do.
Mola-carnai	*Toddalea asiatica*	Rutaceae.
Molongarani	*Paramignya monophylla*	Do.
Mullulkalli	*Opuntia dillenii*	Cactaceae.
Nagathali	Do.	Do.
Nana	*Clausena Indica*	Rutaceae.
Nannari	*Hemidesmus indicus*	Ascelpiadaceae.
Marjnruvi	*Desmodium pulchellum*	Leguminosae.
Nariyelandai	*Zizyphus nummularia*	Rhamnaceae.
Netti	*Aeschynomene aspera*	Leguminosae.
Oomathu	*Datura stramonium*	Solanaceae.
Cosithangara	*Cassia tora*	Leguminosae.
Pavattai	*Pavetta indica*	Rubiaceae.
Pavelum	*Nyctanthes arbortrists*	Oleaceae.
Ponavarai	*Cassia occidentalis*	Leguminosae.
Poola	*Indigofera paucifolia*	Do.
Porivalan	*Toddalea aculeata*	Rutaceae.
Sambal kiluvai	*Solanum giganteum*	Solanaceae.
Savatu-chedi	*Cipadessa fruticosa*	Meliaceae.
Sengarai	*Canthium parviflorum*	Rubiaceae.
Singappu pools	*Breynia rhamnoides*	Euphorbiaceae.
Siru-sale	*Allophylus cobbe*	Spainadaceac.
Siruinji	*Phoenix humilis*	Palmaceae.
Siru-kila	*Carissa spinarum*	Apocynaceae.
[illegible]orai	*Zizyphus oenopolia*	Rhamnaceaee.
Sundakkai	*Solanum trilobatum*	Solanaceae.
Thagara	*Cassia tora*	Leguminosae.
Thalai	*Pandanus tectorius*	Pandanaceae.
Tharni	*Webera corymbosa*	Rubiaceae.
Thirani	*Chomelia asiatica*	Do.
Thulasi	*Ocimum gratissumum*	Libiatae.
Unni	*Lantana indica (camara)*	Verbeanaceae.
Valamburi	*Helectres isora*	Sterculiaceae.
Vel-oomathu	*Datura fastuosa*	Solanaceae.
Vellari	*Dodonea viscosa*	Sapindaceaa.
Vellai poola	*Fluggea microcarpa*	Euphorbiaceae.
Vellilambu	*Hemicyclia sepiaria*	Do.
Virai	Do.	Do.
Yeruukku	*Calotropis gigantea*	Asclepiadaceae.

Tamil name. (1)	*Botanical name.* (2)	*Natural order.* (3)
	D. CLJMBERS.	
Gajjikai	*Caesalpinial bonducclla*	Leguminosae.
Indu-mullu seengaikodi	*Acacia intsia*	Do.
Kalchikai	*Caesalpinis bonducella*	Do.
Kakattan	*Argyreia speciosa*	Convolvulaceae.
Kakkavali	*Mucuna gigantea*	Leguminosae.
Karikaran	*Acacia caesia*	Do.
Karikindi	*Pterolobium indicum*	Do.
Kattu-avaraikodi	*Spatholobus roxbirghii*	Do.
Kattukodimudari	*Ampelocissus latifdia*	Vitaceae.
Kattumandarai	*Bauhinia vahlii*	Legumoinosae.
Kattumalligai	*Jasminum arborescens*	Oleaceae.
Kattu-vallai	*Uvaria narum*	Anonaceae.
Kattuvelli	*Dioscorea pentaplylla*	Dioscoriaceae.
Kanalkedi	*Dioscorea hispid*	Do.
Kodiveerai	*Hugonia mytax*	Linaceae.
Konnoou	*Glorisasuperba*	Liliaceae.
Kottukodi	*Coculus villosus*	Menispermaceae.
Kundumani	*Abrus precatorius*	Leguminosae.
Naruvalan kodi	*Narvelia zeylanica*	Ranuneulaceae.
Onankodi	*Lettosmia elliptica*	Convolvulaceae.
Oothalkodi	*Ichnocarpus furtesnies*	Apocynaceae.
Perandai	*Cissus quardrangularis*	Vitaceae.
Punali	*Derris scandens*	Leguminosae.
Puli-thadaki	*Pterolobium indicum*	Do.
Seekayi	*Acacia concinna*	Do.
Seendalkodi	*Pergularia extensa*	Asclepiadaceae.
Seeraikodi	*Secamone emetica*	Leguminosae.
Siru-palaikodi	*Gymnema sylvestre*	Asclepiadaceae.
Sural	*Ventilago calyculata*	Rhamnaceae.
Thannuta kodi	*Asparagus racemosus*	Liliaceae.
Vannangu kodi	*Combretum ovalifolium*	Combretaceae.
Vellaikundu mani	*Abrus pulchellus*	Leguminosae.
Vellandu	*Acacia caesia*	Do.
Vembalam	*Ventilago calyculata*	Rhamnaceae.
Vembalam	*Ventilago madeaspatana*	Do.

நூலகம்
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